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THIRD] TO IMPROVE THE SOIL AND THE MIND. [SERIES.

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Editorial Notes Abroad.

No. XXIX---A Day in the County of Essex.

Visit at Mr. JOHN CLAYDON'S—the Short Horns—the Land and Cost of Draining it—Wages—Importance of an "Air Drain"—the Stock kept and Manure purchased—What an English Farmer knows—a Ride into the Park at Audley End—Farming in Essex county.

There is a line of the "Eastern Counties" railway that pierces the heart of Essex—carrying one through Chelmsford, the county town, and Colchester, a place three times as large, (famous, to judge from the guide books, equally for its ruins and its oysters,) away into Suffolk, where we have just been wandering and noting, and so on into sandy, four-course Norfolk. But there is another line, turning northwardly from this, just after we are well away from Bishopsgate, and coquetting in succession with the skirts of Middlesex, Essex and Hertfordshire, as no reasonable railway with due regard for the traveler's geographical impressions would probably do—undoubtedly encouraged in this course, however, by the river Lea, in the valley of which, and bridging it every now and then as we proceed, our route will run for near a score of miles—passing, too, as it would be most negligent in any tourist not to add, somewhere to the right of Edmonton, and, later, through the junction of a branch to Ware.* Ground over which, it is true, these letters have before carried us hurriedly; having then in view the roses of Sawbridgeworth, and, upon the day following, the festival within the borders of Cambridgeshire among the South Downs of Babraham.

After which, as at that time specified, it was a pleasant evening drive back into the corner of Essex, to enjoy the kindly proffered attentions of JOHN CLAYDON, Esq., who cultivates two farms, embracing about 1,800 acres, in the vicinity of Saffron-Walden. I had met Mr. C. as a judge at the Suffolk Show, and his active service in such a sphere of duty was not inconsistent, I soon perceived, with the energetic and thorough management of an agricultural establishment so extensive, together with the indulgence practically of a natural taste for well-bred and highly improved stock.

The next morning we looked first among the Short Horns, finding several that would have graced any show yard—particularly, I remember, "Duke Humphrey," as a rich red fifteen months-old bull is called—the only one in England, beside Webb's "Earl Derby," sired by "2d Grand Duke" before his trans-atlantic emigration—also a heifer, who was half sister to that distinguished personage, and a number of charming calves, the progeny of Mr. Webb's "Earl Hardwick," and apparently justifying all the compliments I paid their parent when writing immediately after having mentally daguerreotyped his merits.

Mr. Claydon's land is partially a stiff clay soil, but it varies widely, and embraces some that is quite gravelly. There were nearly 300 acres under wheat; about 520 in barley and oats, chiefly the former; 300 in roots, mostly in Swede turnips, as mangolds appear not to succeed quite so well above a chalky substratum; 100 in grass, (probably permanent pasture,) and 70 in woodland. Upon the clay a six course rotation is advantageously employed, as for example, 1, fallow for turnips or mangolds; 2, barley; 3, clover or sometimes beans; 4, wheat; 5, beans, and 6, wheat a second time, followed as above by roots. The 800 acre farm, as I understood, belonged to Mr. Claydon himself, while the other was rented. The former had been wholly drained, and the latter to a considerable extent, at a cost of from £3 10*s.* to £5 per acre. The general depth he has preferred is 3 feet, but on soils of a gravelly kind he goes to any depth necessary to tap the springs—sometimes as much as 7 feet. We stopped to see the tile works,† and I was told that the pipe in ordinary use were sold here for 24*s.*, (say $6 per 1,000,) and that the workmen who make them are paid 8*s.* (say $2) per 1,000 for the labor involved, fuel being furnished. Various patterns of tile for other purposes, and of brick, were also manufactured at the same place.

The regular weekly wages of labor here were 9*s.* and beer, that is 1*s.* 6*d.* (about 37 cents) per day, but men in charge of teams receive 11*s.* per week, and good workmen in the busy season can earn much more by the job. I should not, however, have diverged from the subject of draining, without adding that Mr. Claydon's experience on *heavy clay* leads him to estimate very highly the importance of having an air drain, as it is sometimes called, at the head of a field—that is, a line of tile connecting the upper ends of the lateral drains, and open, probably at both its own ends, for the admission of the air. He thought

*EDMONTON and WARE—see the melancholy narrative of JOHN GILPIN, as chronicled by William Cowper, a most veracious author of the last century.

†It may have been here [illegible] at Mr. Crisp's, as mentioned in a recent letter, that I saw the process of making [illegible] tile."

Jno L Tappan

the circulation thus promoted through the whole system of underground channels, of most efficient assistance in very stiff land to the proper exercise of their functions, supplying, in some degree, the place of the abundant pores in an open and gravelly soil, in admitting greater atmospheric pressure upon the contents of the drains—thus facilitating their more speedy passage outward—and, perhaps, also of service at other times in maintaining air currents, which it is not impossible might create a downward draft as it were, and increase by degrees the porousness of the superincumbent soil. However fairly or unfairly I may represent from memory the theory by which he explained the benefit resulting from such a head drain, this reference to the subject should stand mainly upon the merits of the experience involved, which, as I have said, was stated to be decidedly in its favor.

Among the stock on the place there are the Short Horns, intended as the foundation of a select herd, then including 12 or 14 head—6 of the cows in calf to three of Webb's best bulls—and all, as intimated above, forming really a choice and promising beginning. Then come some of the nicest improved Essex pigs I anywhere met with, breeding sows to the number of 18 or 20; and last, and probably as yet the most important of the three, a flock of about 570 breeeding ewes and 600 lambs. Beside, however, there are annually fattened about 100 bullocks, and 30 to 40 head of young stock are generally wintered, while from 800 to 1,000 sheep are fed for the butcher according to the success of the turnip crop. To keep these animals the farm would yield 400 quarters, or thereabouts, (eight bushels per quarter) of beans; 70 to 80 tons of oil-cake would be purchased at from £9 per ton to £12 sometimes for the best home-made, while the growth of the roots would require 50 tons of "blood manure" or superphosphates, applied at the rate of 3 cwt. per acre, at a cost of 8*s.* per cwt. If the feeding of animals, according to Mr. Claydon's experience, can be made to pay for the oil-cake and the attendence they require, all the turnips, hay, straw, &c., will be willingly "thrown in" by the farmer—reckoned in other words, as so much paid out for the manure they produce. It is a rather extraordinary stroke of good luck, as I understood it, if purchases and sales of feeding stock can be made to do anything more than this—say, for instance, to return to the feeder 2*d* per bushel for his turnips. One source of fertilizing material, to which we have already several times alluded, is largely made use of by Mr. C., namely, burnt sods and clay—the ashes being prepared at a cost of 5*d.* for 20 bushels, and employed mainly, I think, upon root crops.

The rent paid for land here is about $7.50 per acre without tithes, or $6.50 where also subject to a tithe of about $1.25.

Few pleasanter and more useful days did I spend than that at the "Rectory Farm," and I am sorry that my notes prove so meagre, and my memory so treacherous as to all that might be narrated of what we said and did. Moreover I had hoped to procure from Mr. Claydon some memoranda as to the cost of the production of the crops he raises, of feeding stock, etc., etc., to which end I must here confess to having propounded perhaps more questions than even an American would generally consider it admissible to ask. To tell the truth, however, it seemed to me one of the most important illustrations I could furnish of "English Agriculture"—aside from any intrinsic value of the facts themselves—to show, if possible, how well and accurately the best English farmers know *just what they are doing*—that is, not only whether this or that particular branch of the year's affairs is to return a gain or not, but also the general features of the Agriculture of their district, and the details of every part of it in which they are themselves intimately concerned. It will be remembered, in looking over the approximative statements often given in these notes, that I, and not my informants, am responsible frequently for any lack of precise exactness they exhibit; for inquiries made as they occur to the mind in a stroll through the fields, in driving from farm to farm, or otherwise, cannot of course be answered as they would be in the library, with the farm-map and books at hand for reference. I saw enough of my host in the present case too, to learn that an eighteen-hundred acre farm is no child's play to manage, even in England, and if perchance he still remembers my long string of interrogatories, I can only express the wish that he might find in the above considerations as great excuse for their having been made, as I can in the pressure of his engagements for their never having been answered in detail.

Particularly I wish I might carry the reader with me on our ride that beautiful 8th of July—pausing here to inspect a heap of calcined clay in red clods and powder, or cutting across the headland of one field to visit the crops in another; spying out the insects (if any there were) in the tall, stiff beans blackening over for the harvest; following the scarifier up and down to examine its operation; passing by the cottager's garden, famous for its berries; stooping under the tile sheds and thrusting our sticks into the soft clay ready for moulding; making a flying call upon a nice bit of horse flesh, and stirring up a litter or two of chubby pigs; and last, and most of all, of the noble park at Audley End, with its grand old beeches, and their broad and welcome circumference of shade; the troop of fallow deer that clustered under them, with little fear of treacherous dealings from the human forms more familiar to them there as kindly admirers than as foes—two hundred and fifty or three hundred in number, watching us like coy youngsters from a village school, and giving an effect to the sylvan scenery about and the verdant turf beneath, which we Americans find far more often in pictures than in reality. However much I might fancy, nevertheless, that my forte lay in descriptive effort, and however well memory may recall a general outline, any landscape to be depicted in presentable form, requires more aid than memory alone can give the painter; he must have sketched this or that effect of blended light and shade as they strike him at the moment, if he would attain to such a touch of Nature as Nature herself alone can give. It has been said, I think, that if there is any subject upon which one's manhood is peculiarly sensitive, the world over, it is that of equestrian accomplishments; and without even pretending to present a modest under-estimate of those which I possess, (mainly acquired, I think, by some familiarity with the fine engravings of Suffolks and Clydesdales presented during the past twenty-five years in the *Farmer's Magazine*,) it is no disparagement of them, I trust, to add that my head would have been more clear for appreciative observation if my feet had been in some position more familiar to them than the stirrups. As a previous foot-note has contained an allusion to one instance of not altogether masterly horsemanship embalmed in legendary rhyme, it is, however, needless to pursue the theme farther at this time.

The view commanded in some parts of the park is considered an unusually fine one, and the mansion of Lord Braybrooke, the proprietor, is an extensive and lordly resi-

dence as one sees it from the public road, the walls being sunken on either side, so that the prospect from it may include an uninterrupted range of woodland scenery. We also drove into Saffron Walden, a place of five or six thousand people, and containing an interesting museum and a fine church.

The county of Essex, toward the eastern part of which we had already visited Mr. Mechi's noted estate, is a district of not quite 950,000 acres, long in cultivation, including near the Thames much marshy grass land, and in the vicinity of towns numerous gardens and farms devoted to the production of seed and similar purposes. Well watered and generally of a somewhat heavy loam, it furnishes London with excellent wheat, while according to Arthur Young and Loudon, its arable lands are "cultivated better than nine in ten of the other counties." "With every facility," says Mr. Caird, "which railways, roads and navigable rivers can supply for the disposal of produce and fetching back manure, this county might be expected to be eminently well cultivated, the landlords wealthy, the farmers prosperous, and the laborers fully employed." But, writing in April, 1850, he represents this as "far from being the case." Certainly Mr. Mechi does not present a very attractive picture of the methods in vogue when he began at Tiptree Hall, in that part of the county, but it is possible that a more favorable one might be drawn of the northwestern district, partaking as it may more of the character of southern Cambridgeshire; for, from what I saw in that region, and what I have heard of the farming of such men as Mr. Webb and his landlord, Mr. Adeane, Mr. Jonas—formerly of Ickleton, and now, I believe, of Chrishall Grange, not far from Saffron Walden—Mr. Claydon, and others, I should find it difficult to believe that there is not here some of the most thorough and sensible cultivation which the kingdom affords. The Adeane estates are said to include 300 acres, irrigated ever since the days of Queen Elizabeth, and something of the kind has been carried on upon a smaller scale at Audley End.

GAS TAR FOR TREES.

EDITORS COUNTRY GENTLEMAN—The Michigan Farmer of Feb. 11 says: "J. W. M. of Amsterdam, N. Y., writes substantially that an application of coal or gas tar has destroyed his trees. I have, in pursuance of the recommendations of several horticultural journals, applied it *literally* to the whole of an orchard of about sixty acres of apples, containing over 2,000 trees, and several hundred other fruit trees, including peach, pear, plum and cherry. They are all in fine condition, and thus far show no signs of injury. The bark beneath the tar is fresh and green. The tar was applied from about one inch below the surface to 18 inches above.

I write you from an impression that I shall be as likely to obtain either directly from you or from sources to which you can recommend me, the earliest and most reliable information as to what I should do.

The property periled by this experiment, if endangered, amounts to many thousands of dollars, and that I feel great solicitude you may well conceive.

You cannot scrape the tar from the tree without removing wholly the *outer* bark. This I have tried.

If the coating will *not* injure, it is certainly a complete protection from what here are great pests, *mice and rabbits*.

Detroit, Feb., 1860. H. H. EMMONS.

We have never tried gas tar nor seen it tried in the way mentioned; but have heard of disastrous results from its use. From a want of experience we can only speak by way of suggestion.

The trees will probably remain uninjured till the hot sun of spring acts upon them. If the tar were applied freshly at that time, we think it would destroy them, by the combined action of the great heat of the black surface, and the melted tar running into the pores. There is a possibility that the tar may become so well dried by that time, as to obviate the latter objection. If on the thick bark of old trees, applied in winter, the danger would be comparatively slight. On young trees, freshly applied in warm weather, death would be nearly certain. There would be various grades of intermediate danger as the circumstances might vary. If the trees are mostly young, we should prefer to get rid of the tar. Ashes and water or soapsuds, will remove it soon after it is applied. Probably turpentine would at a later period; but the turpentine itself is dangerous unless quickly washed off by the assistance of the ashes or soap. On old trees, with the tar dried in winter, and the coated part shaded with straw, we should not apprehend much danger. Such experiments should of course be always tried on a small scale. We regret we can do no more at present than offer uncertain suggestions—we hope some of our readers may give the results of their experience.

Chestnuts and Walnuts from Seed.

I should like to ask how long it takes to grow chestnuts from the "seed;" also "English walnuts." Would the seed planted in spring, vegetate sooner if the shells were partially or wholly removed? At what age do they bear fruit? Would they bear sooner if grafted on their own roots, or is there any other stock that would be better? F. B.

Chestnuts will grow the following spring after they ripen. They usually fail to vegetate because the shell is allowed to become dry. The moment they drop from the tree, they should be mixed with or buried in moist peat, sand or loam, and kept in this moderately moist state till planted. If left upon the ground, as soon as they fall, and covered and kept moist with leaves or straw, they would readily grow the next spring, if the mice did not get them. Nearly the same treatment is applicable to the black walnut, except the nut does not dry so soon as that of the chestnut. Probably the walnut would grow more readily if the shell were removed about the time it sprouts. It might wilt, decay, or spoil, if done much sooner. We know of no advantage in causing early bearing by grafting, unless such trees were selected to graft from as have borne unusually soon. Nor is there any other stock to recommend.

THE BLACK KNOT.

I should be glad to know if you or any one else can give a remedy for the unsightly and destructive black fungus coming on the limbs of nearly all our plum trees. S.

A remedy of twenty years trial has kept our own trees clear, if promptly and repeatedly applied. It is to cut off every diseased part as soon as it makes its appearance. Never mind if this cutting does disfigure the tree—it is better to do so than to have it disfigured with black-knot and death. Some say they have tried this mode and failed—but we have ascertained on inquiry that the disease in such cases had been allowed to nearly ruin the tree before any effort was made to arrest its progress. A man might as well talk of insuring his house against fire after it is in ashes; or propose to send for the doctor after the patient is buried. Others complain of the "trouble"—but it is no more trouble than cultivating the soil. Those who expect to have fine fruit without "trouble," will have to wait a long time for it. "In the sweat of thy face shalt thou eat good plums." We have found that washing the wounds made by these excisions with a solution of chloride of lime, lessened the tendency of fungus to break out again.

Farm Improvement---II. Drainage, Manure, Etc.

Farm Improvement with "the many" a Gradual Work—Underdraining, and the Change it Works on Hard and Sterile Soils—Saving and Applying Manure the Basis of Progressive Farming—The Corn-field should be Thoroughly Manured—What to Plow, and Why Keep Stock—Mr. Quincy's Remarks—Show Them that "It Pays," and Agriculture will Become Popular.

Among the works of improvement in which the farmer may profitably engage, we have already instanced the subdivision of the farm with an idea to its symmetrical arrangement for the most convenient, effective and economical management. This we have said, after the plan is once fully formed, may be a gradual work—"one field at a time, and thorough work with it," and such progress will best suit the means of the majority of farmers. We have little sympathy with those who will do nothing because they cannot do a great deal—who make no progress because they cannot go rapidly forward—and less still with those capitalists engaged in agriculture, who scorn the work of the farmer of moderate means, because it does not equal their own well-puffed achievements. It is our aim to induce the *many* to begin, and to point out a practical way of doing so; well knowing that the work once fairly commenced, will go on without our urging.

Let us return then to the field and farm instanced in our former article. It may be that more or less underdraining is needed in order to profitable cultivation. This first field may require a few drains in the clayey corner, or down the slope, (which we take in here because it cannot find a better place in other fields,) to render it equal to the remainder—and to make it one of the best lots on the farm. Let us not leave this improvement unattended to. Its results will reward us for many years with largely increased productiveness. It will be taken from the list of hazardous and uncertain, and be placed among those surely productive—no longer demanding a peculiar season and culture in order to the remuneration of the labor bestowed upon it. Almost every farm has fields of this character—fields sure for good culture to return good crops, very extraordinary seasons and casualties excepted—and almost every farmer has those which fail frequently, however much labor may be bestowed, because the season does not suit them. And the grand difference in soil, character and certainty, lies in the fact that one is porous and friable from drainage, natural or artificial, while the other is hard and sterile from the presence of or effects of stagnant water in soil—the remedy for which is found in this simple operation. We have so frequently urged considerations bearing upon this point, that we will not continue them in the present connection.

An equally important question to be considered by those anxious for farm improvement, is this, "Do I avail myself of every means within my reach to increase the amount of manure made and applied upon the farm? Do I give care and labor to this subject, commensurate with its importance in furthering the ends proposed?" If so, the ground and basis of farm improvement is laid. If not, the matter must receive greater attention, for we may rest assured that a reasonable amount of labor in this department will be well rewarded, and cannot be withheld without great prejudice to our advancement.

The greater the amount of manure we can apply in any year, the larger our fields may be. But it is far better to grow large crops on a few acres, than to grow small crops on many acres. To return to the first crop, heretofore proposed, we would repeat that no farmer should plant more land to corn than he can thoroughly enrich with manure. It will then be fit for any following crop. No farmer should plow up any portion of his farm unless he can prepare it for growing good crops by manuring and culture. Every farmer should keep stock, that he may be able to grow grain, and he should grow grain that he may be able to feed stock and make manure. If we avail ourselves of every fertilizer within our reach—if we make our fields accord with our manure, enriching each of them thoroughly in its turn—we shall soon be able to give every crop, and the whole farm, that preparation and culture which shall ensure its productiveness and certain profit.

Speaking on the question, "What will tend to make agriculture pleasant and profitable as a pursuit?" recently discussed at the Boston State-House, the Hon. JOSIAH QUINCY, Jr., made some remarks very pertinent to the subject before us. He said (as reported in the N. E. Farmer) that he thought the great question in relation to agriculture was, "Will it pay?" and our present purpose should be to show that it will. He spoke of farming in England and France, where men invested very large amounts of capital in cultivating small farms, thus making it very profitable, and getting the most from the land, while here our farmers are too desirous of extending their labors over too much territory, and not half cultivating any of it. The report, (to quote it directly,) adds further:

"He said that there was nothing that paid better than money judiciously expended on the soil, and in proof of this he spoke of pet pieces of ground that yielded at the rate of $50 to the acre, and he asked why this might not be extended to 100 acres? He had 10 acres of ground on which the hay was not worth cutting; finding this, he broke it up, fertilized it, harrowed and seeded it, at an expense of $50 per acre, and the first year he got 2¼ tons of hay from it, which he could sell at the barn for $20 per ton, thus paying in one year for the entire expense. He had last year raised 300 tons of hay, which cost him $700, which he harvested for $2.50 per acre, while his neighbor could not do it for $5; but the speaker said he had the advantage of the best machines, mowing, raking, &c., and it is in not having these that farmers lose money. He thought farmers were the most extravagant men in the world, and he showed this by their neglect in saving manure. Mr. Quincy then showed that a cow kept up during the year, will produce more value in manure than the value of her milk, relying on the estimate of Dr. Samuel L. Dana, that she produces (when composted with two parts muck,) 21 cords. He alluded to the care which is taken in Europe in this matter, and spoke of the result in bountiful harvests.

The great element of farming, said he, is saving, with a liberal and judicious expenditure, and we must either invest more capital, or reduce the area of our farms to make the land yield what it will do, and it would be far better if farmers invested their profit in their land than in bank or railroad stocks."

[For the Country Gentleman and Cultivator.]

FROSTED CORN.

Observing in divers publications, instances of farmers having plowed up large fields of Indian corn, owing to the frosts of last June, I am induced to give my experience upon the subject. About the year 1849, I had a small field of corn cut down *twice* by frost, that made good corn *without* replanting; and this was my guide for last year, when I planted a field of 35 acres, Ohio river bottom, very flat, with basins here and there of half an acre each. When the frost came, this corn was eight to ten inches high, and on the following day the plants looked as though hot water had been poured on them, especially in the basins. *I did not replant*, and notwithstanding the excessive drouth and great neglect sustained by my hands leaving at wheat harvest, I have just now finished harvesting about 2,500 bushels good sound, thoroughly matured corn.

A KENTUCKY FARMER.

[For the Cultivator and Country Gentleman.]

LARGE HEAVY PORK.

Burlington county, New-Jersey, has become somewhat noted for some of its crops of *extra heavy* pork, which are annually made by some of its farmers, and sold in the Philadelphia, New-York and other markets. Some of these hogs are of extra size, or rather they are made extra large by being extra *fat*, so that their individual weight much exceeds what we formerly used to kill. This is owing chiefly to good and careful feeding, though those farmers who make pork such an object, are careful to select the best stock for breeding, from our old common stock of hogs, and they have been crossed and recrossed, and we know of no name to specify them by; yet we think them superior to any other kind we know of, in point of fact for the grand object of making superior pork, as the result proves—that being the best test after all is said and done.

Our farmers generally like their pigs to come in April and May, when the sows can have a good flow of pasture in addition to some little feed. After harvest, they all run in the grain stubble awhile, soon after which they receive a little additional help in their feed to keep them in good thrift. The pigs are selected for keeping over; and the others, and also those one year old, are fed on the soft corn—then on better corn, and finally on the best corn in the grain and on corn-meal—more or less of each, according to the *varied* preferences of each feeder—generally raw, though some scald the meal with hot water, and let it swell from after one feeding time to the next, and then again the same—this more especially at latter part of feeding. They are mostly killed in January, though a few are kept till first of February.

After long high feeding, they become very dainty of grain that has the least improper taint, and require much care not to "cloy" them.

I have been at some pains to collect an account of the weight of some crops of pork, and of a part of other crops, and herewith send them for publication:

The following is the nett weight of 32 of the hogs which were raised, fatted and killed by Thomas Hood:

720—630—625—624—617—610—592—585—576—570—569—565—563—562—561—560—552—545—542—542—541—539—538—532—531—529—527—520—520—513—511—504.

It will be seen that one weighed over 700 lbs.—that six weighed each over 600 lbs.—that fourteen averaged over 600 lbs. each—that the lightest one of the whole 32 weighed over 500 lbs.—that the whole 32 averaged 563 lbs., all round.

Thos. Hood also killed other hogs, which were fine and well fed. They were killed about the first of February, 1860. Last year (1859) he killed 41 hogs, which averaged nett 532 lbs.; and in 1858 he killed 44 hogs, which averaged 543 lbs. All these hogs, and those yet to follow, hung on the gallows over two nights to dry and thoroughly cool, and then were carted to the railroad depot, and then and there weighed, as sold. They would have weighed more if weighed the day they were killed and dressed.

The following is the weight of 22 hogs, raised, fatted and killed by Isaac Harrison, which however are not as large this year as formerly. I have not the last year's weights. He also killed a lot of "pigs," some of which run from 175 to 300 lbs. nett:

649—626—606—590—587—557—539—510—510—505—502—493—491—483—466—458—435—427—426—421—419—408.

It will be seen that of this crop, three hogs weighed over 600 lbs. each, and the whole 22 averaged 504 lbs. all round.

Wm. Taylor killed 34 hogs, which averaged 475 lbs., the heaviest weighing 570 lbs. nett.

Thos. Emly killed 33 hogs, averaging 460 lbs.

Edward Jamison killed 53 hogs, of which 24 averaged 430 lbs.

The following is the weight of 52 hogs, after being dressed ready for market, and weighed the same day—fatted and killed by Elwood Haines:

474—468—452—430—430—429—425—423—419—417—416—416—412—409—408—402—398—397—393—392—389—388—385—385—384—384—384—384—383—382—382—380—380—375—375—371—370—368—368—366—362—360—358—350—345—345—344—344—332—330—330—325.

It will be seen that of the foregoing, 16 hogs weighed each one over 400 lbs., and that 40 head of them average about 400 lbs., and the whole lot averages 386 lbs.

There were many other excellent crops of pork killed in this county worthy of notice; but I have not the weights of them, and send such as I have. WATSON NEWBOLD.

Burlington Co., N. J.

MOLE PLOW FOR DRAINING.

If you think it worth while, I should like to get some information from you as to Col. Dickinson's mode of draining, with a conical piece of iron fixed at the bottom of a thin, sharp coulter. You say nothing about it in the Register. Now here, where land is worth only from $30 to $35 an acre, and where draining would probably cost a like sum, it seems to me hardly possible that it could pay; and yet our land though high and rolling, needs draining. Wheat and clover heave out and winter kill frequently, and the soil gets soddened by the spring rains. We have for the most part a yellow clay subsoil; soil varying from a clay loam to a sandy loam. There are a good many boulders on and below the surface, presenting serious obstacles to subsoiling or draining. Would they make draining by horse-power impracticable? How are we to prevent the bottom of a drain partaking of the inequalities of the surface? How are we to manage about main drains, outlets to lateral drains, &c.? How much team does this draining plow require? In short, is this kind of draining suitable to our circumstances? J. W. SULIOT.

Summit Co., O.

Col. Dickinson's draining plow is essentially the old English mole plow, which is described briefly and figured on p. 78 of Thomas' "Farm Implements." It can be only used in a subsoil nearly or entirely free from stone. Large stone would at once arrest its progress. It could not of course be used in the subsoil described. The friction of the coulter and plug are enormous. Hence, to cut deep enough for permanent value, say 2½ feet deep, it has to be moved by the use of a windlass, fixed by strong iron anchors, as represented in the book above referred to. It must be used either on a smooth, descending surface, or else the course for a constant descent must be previously staked out for the machine to follow. We know of no person who manufactures this plow for sale—there are not many places sufficiently clear of stone to use it. It is not so much used as formerly, now that tile is generally employed. The "draining plow," for loosening the earth for shovelling out, has greatly reduced the expense of cutting ditches, where its use is understood.]

[For the Country Gentleman and Cultivator.]

REMEDY FOR THE CUT-WORM.

The most thorough mode of destroying the cut-worm, is to fatten hogs in the truck patch or garden, after the crops are taken off in fall or winter. They destroy the larvæ.

A KENTUCKY FARMER.

TO MAKE COWS TAKE THE BULL.—I have two cows, calved first Dec., in very fair condition, which as yet show no symptoms of bulling. The bull runs with them. I am anxious they should be with calf as soon as possible. Some say by giving salt three or four times a week, would bring them in. Please say what might be done, and you will oblige J. M. *Morpeth, C. W.* [We are assured by those who have made the trial, that by giving the cow a piece of rennet as large as the palm of the hand, thrusting it down her throat, she will take bull within 24 hours, invariably.]

WINTER PLOWING.—"Whenever the ground is dry enough, and the frost out, says the Ohio Farmer, begin plowing. It often happens that our springs are so wet that plowing cannot be performed until late. If performed during the fall and winter, much time and even a crop may be had, that otherwise would not be got *in*, in proper season."

Agriculture---Its Standing and its Needs.

How Agriculture stands in public opinion, and what it needs to place it in a proper point of view, are questions worthy of frequent and careful consideration. Though a subject we have before spoken upon, yet deeming it worthy of occasional recall, we would take it up now and here.

The life and employment of a farmer has never lacked its eulogists; indeed, it has been praised and lauded from classic days until now, beyond all other occupations which men follow for a subsistence. The members of most other active business callings, seem to look upon Agriculture as a pursuit rich in varied charms and ample rewards; and often picture to themselves a farmers' life, as free from the cares which now vex them, and sigh for an exemption from the anxieties of their present business, and the enjoyment of the elysium of a farm of their own in some pleasant rural neighborhood. Mr. Sparrowgrass has many counterparts in real life—men who have a kind of poetized idea of farming, very different from the experience of the practical agriculturist, and who little dream of going earnestly to work themselves, or of depending on the products of their own labor for support, as he must do; but they have made money in other occupations, and now propose to themselves a leisurely enjoyment of agricultural felicity. What the result often proves, we need not repeat.

Another class—men who have had one sort of experience in the matter—look with very different eyes upon the pursuit of Agriculture. We have met such,—and they have formerly been well described in this journal, as men who have toiled for long and weary years, always working hard, and yet who are now very little in advance of their starting point—what has been gained, is the result more of *saving* than of *making*. What they possess they owe to the closest economy and ceaseless hard work. The farm has been to them a scene of much toil and a source of little profit. To make "both ends meet" has taxed every energy, and when anything more has been done, it has ever seemed at the expense of some much-needed comfort and convenience. Meaning well, and anxious to thrive, they have ever found it an up-hill business, and we wonder not that they are ready to decry the idea of making a good or easy living by the culture of the soil.

Others—practical farmers, also—take a more encouraging, and it seems to us, a more reasonable view of farming, and the requisites to success therein. They look upon agriculture as the basis and substratum of all other avocations of men, as "fuel that feeds them all—that gives power to the great locomotive of human achievement." With this high idea of its importance, they do not content themselves to follow the old routine whether successful or unsuccessful; they see the advances and improvements made in every thing around them, and instead of sinking back satisfied that no progress can be made, no more profitable course pursued, no waste prevented, no neglected crop, product, or fertilizer turned to profitable account, they apply all their energies, mental as well as physical, to the development of the resources of their farms, and the means at command about them. These men do not come to you with the tale of "all work and no profit" on their lips. They not only save but *make* money, and they do it fairly and honestly, by creating, as it were, out of the soil, new and valuable products. There need be no paltry shifts and meannesses in such a life, like those for which most avocations furnish too many often-urged excuses.

What, then, is the true standing of Agriculture? Is farming pleasant as a pursuit, honorable as a profession, and profitable in result, or the contrary? The answer depends upon the man and the circumstances. There are certain requisites to success which may not be foregone—enterprise, intelligence and capital, as well as industry, are required in this as in all other pursuits. There is ample room for the exercise and employment of all these, for it has been well said, "Agriculture in its true sense is an Encyclopedia in itself—requiring great knowledge, fine powers of observation, high mental cultivation, assiduous thought and study, and opening its arms to ingenuity and invention." He who enters with enthusiastic relish into the business will find it pleasant—if he understands and appreciates its demands upon him. Its respectability and dignity, few now question, and there would be little room to do so, would every farmer show himself a workman, and not a bungler in his profession. Of its profit there will ever be varied opinions, as men may find it in their own experience—but it will be found that comparatively more men arrive at competence in life through agriculture than through any other avocation. Hence we conclude—and reaffirm the conclusion—that with the requisites to success in this or in other pursuits,—intelligence, capital, enterprise, industry—agriculture will prove as profitable, as honorable, and far pleasanter, as a life-long employment, than any other which may be chosen. This seems to us the true state of the case.

The great need, to render Agriculture more uniformly successful, is the increase and diffusion of agricultural information and its thorough practical application. The spirit now awakened must extend its influences until we have many more thorough farmers who exemplify the best modes of culture and management, and show by their farms, their crops, their stock, and their general success, the most direct way of making a living, and a good one, by the culture and products of the soil. Such examples are annually increasing, and are of incalculable influence upon the prosperity of the country, and it is an influence which will never cease to act for good. Our scientific men and schools must also join in the work. Agricultural papers should be circulated more widely, and read more carefully—indeed we can scarcely limit the power they may exert in showing the many how the few succeed, and as a means of spreading the experiments, and inquiries and suggestions of the thousands of minds anxious to elevate farming above its present position—ready to devote all their energies to the achievement of an honest success. It is our highest ambition to do all in our power for the progress of this greatest material interest of our country and of mankind.

[For the Country Gentleman and Cultivator.]

FARMING ON A SMALL FARM.

Messrs. Editors—In giving some of the reasons for, and advantages of, commencing farming on a small scale by young men of limited means, my object is not to prevent or discourage them from laboring on other men's farms, at a salary for a limited time; say long enough to accumulate a few hundred dollars, with which to buy a small farm of from fifteen to twenty acres, but rather to encourage them to do so. And also to so manage and calculate their work, when farming on a small place, as to keep it ahead, and thus get time to work out by the day, when work is driving and wages good; as in planting and hoeing, haying and harvesting, &c.

The great aversion to manual labor, in my opinion, means aversion to laboring for others, or working out; and that one of the principal causes of this aversion is the

opinion, that at the present price of land, it must take a young man a very long time if he ever accumulates money enough to buy a farm. Once satisfy him, that by a few years labor on a farm, by the month or year, he may save enough out of his earnings to buy a small place, and that by good management, and industry, and economy, he can make enough in a few years to add more land to his little farm, or be able to sell and buy a larger one; and that by pursuing this system of operation, he may finally become the owner of a good farm—I say, once satisfy a young man that this may be done, and a large portion of the aversion to working on a farm will be removed.

What drives thousands of young men into other business, is the idea that they cant do anything at farming without a farm of some size, say from fifty to one hundred acres; which it will cost several thousand dollars to purchase and stock with suitable teams, tools, &c., and that it will be very difficult, if not impossible, for them ever to compass the means of getting such a farm. Hence they reason, that for them to undertake to earn the money to buy a farm by working out, would be very likely to end in being hirelings all their days. And they find no difficulty in pointing out plenty of examples, to sustain this kind of reasoning. To show that this is a mistaken idea, and that by pursuing the course pointed out in this, and perhaps some future numbers, they may be reasonably sure of arriving at a moderate, but respectable competence, is our object in penning these articles.

But to come more directly to the subject in hand. One of the best reasons for commencing farming on a small scale, is found in the fact that farmers are often urged to work less land, and cultivate what they do work better. They are repeatedly told that a few acres well tilled would yield more clear profit, than twice or three times the amount of land as ordinarily cultivated. The correctness of this kind of reasoning is further shown, by the frequent publication of accounts of good crops and large profits, that have been realized by the skillful cultivation of a few acres in the best manner. All of which goes to show—what by experience and observation, we have also found to be true—that as large net proceeds or clear profits, may be made on a little farm of from fifteen to twenty acres, as is usually realized on fifty or sixty acres.

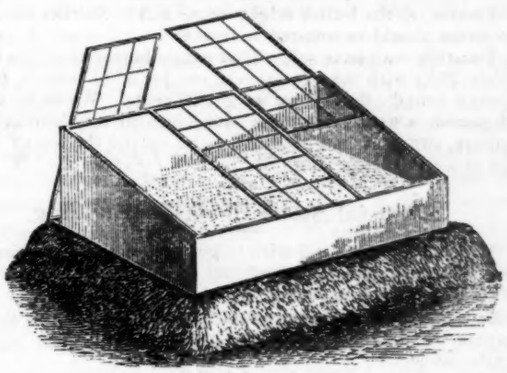
Another reason for farming on a small scale, will be found in the fact that it will have a tendency to improve the agriculture of the country generally; by showing that it is better policy to cultivate a little land in the best manner, and realize large returns thereby, than the more common way of running over large farms at a very little if any profit. Furthermore, we believe that one of the best ways to promote a system of farming, calculated to get the largest amount of produce from the least land, will be the course we recommend, for young men to pursue. For being anxious to improve their circumstances, they will labor and study to make their little farms produce the largest possible amouut, and at the same time having an eye to the sale of the place at some future time, will not allow it to deteriorate in value or productiveness on their hands. And men, once accustomed to the advantages and profits of cultivating land in the best manner, will not be likely to pursue a different course, when they become the owners of larger farms.

Farming on a small scale, is more particularly adapted to young men, for the reason that having but small families, if any at all, their expenses need not be large; conseqently, the principal part of their income may be used to pay debts, or saved to buy more land. In this, as in most other kinds of business, a man's net income or profits depend, not so much on what he produces, as on what he saves. For instance, a man that raises $1000 worth of produce at a cost of $900, is only gaining or laying up money half as fast as one that raises $500 worth at a cost of $300.

We further believe, that the course we recommend for young men, would be better than going into a new country, for the reason that twenty acres of good land may easily be made to yield as many dollars worth of produce, as 100 to 150 acres usually do in new sections remote from market. We also believe, that the same industry, economy, and self-denial, that was practiced by those sturdy pioneers, that as a general thing, without any money to begin with, settled on and cleared up the heavily timbered lands of Western New-York, would, if practiced by the young men of the present day, secure them a fair competence, in less time and with much less labor and hardship, than was necessary in the early settlement of the country, to say nothing about the labor and expense of making roads and bridges, building school houses and churches, or the liability to sickness consequent to a change of climate, and the clearing up and bringing into cultivation of a new rich soil. Besides, the satisfaction of living near friends and relations; and if necessary, being able to aid or take care of parents in old age, and the enjoyment of old associations and congenial society.

We also think that a young man can do better on a small farm, than he could by going into any mechanical pursuit. And also that he would be a great deal surer of eventually arriving at an independent position in respect to property, by taking the course we recommend, than he would by entering any of the crowded and overstocked professions or avenues of trade.

There are many other reasons for, and advantages of, commencing on a small farm that might be given, did time and space permit, but we must pass on to the consideration of the best course or system of management on a small farm, which will form the subject of another communication. F. *Orleans Co., N. Y.*, 1860.



[For the Country Gentleman and Cultivator.]

HOW TO MAKE A HOT-BED

Eds. Co. Gent.—I send you my plan of putting up hot-beds. About ten days before I want to put up the bed, I throw the manure up in a pile about 8 feet broad and 4 feet high, and in length according to quantity. I set my beds about half under ground—that is, I dig about a foot deep, and throw the dirt on each side, which answers for banking up. I set the frames on blocks, or rather pieces of boards about 6 inches wide and as long as to hold the frames to their proper place. I set 4 blocks under each frame, and drive a stake inside of each block to hold them to their place. The stakes should be drove square with the frames to hold them stiff and to place. Bank up on the outside to the top of the frames with earth, and make the beds in length from ten to fifty sash, according to convenience; and when the beds are ready for the manure, they are 2 feet 4 inches on the lower, and 3 feet on the upper side, (and bottom level,) which is 8 inches fall. I put the manure in the bed 20 inches deep, evenly and well beaten down with the fork, but don't tramp it. I put the manure in very hot, just when it is in the height of fermenting, and put the mold on as I put the manure in, which keeps the heat in the manure. The mold I put about 8 inches deep, which fills the bed at the lower side, and being level, within 8 inches of the upper side. I let it stand a few days before sowing, and if the heat is too great, after settling about 4 inches, I put on two inches more mould. The heat is right when the weeds start freely. My object in setting the frame on blocks is to save manure, as it takes one-third less, which is a great object among gardeners in putting up two hundred sash.

Pittsburg, Pa. W. Petrie.

[For the Country Gentleman and Cultivator.]

Winter Butter.

Eds. Co. Gent.—I occasionally see inquiries in the Gent. in regard to making winter butter. Some find it difficult to make the "butter come," even after churning nearly the whole day. I will give you our method, if you think it worth the space it will occupy in your valuable paper.

Firstly, then, the fountain from which we obtain our milk is kept pure—that is, the cows are kept chiefly on hay, with a few roots, and a little meal and shorts, together with a *little* cut straw mixed with the meal once a day.

Secondly—The cows are kept *clean* by the use of a good bed of straw, and a card—so that when the milk is strained there is no *sediment* (manure) at the bottom of the pail—think butter better flavored and colored some other way.

Thirdly—the milk is strained into pans filled about half full, and immediately set into another pan, standing upon the stove, containing hot water and allowed to remain until scalded, or until the top of the milk appears wavy. It is then set away, and stands forty-eight hours, for the cream to rise. When the milk is skimmed, the cream is put into a stone churn (this is the kind we use) and thoroughly mixed by stirring, and when four days cream has accumulated, we churn. At the time of performing this operation we add a little carrot juice--say a middling sized carrot to every two pounds of butter—the carrots are washed and scraped, then grated fine, and the juice squeezed through a cotton cloth—this gives the butter a nice appearance, and we think, and so do others, that it improves the flavor. The churn is now set into hot water, and from fifteen to thirty minutes churning brings the butter. Care should be taken not to let the churn stand *too long* in hot water, as the butter might come soft. Neither the milk or cream should be allowed to freeze.

Fourthly—we have sold all our winter butter up to this time, (Feb 22d,) with the exception of one jar of 24 pounds, for 24 cents a pound—for this jar we got 20 cents. We make about 15 pounds a week from three cows—one farrow, the other two heifers, two years old in March—one calved the 6th of Dec. the other the 1st of Jan. J. L. R. *Jefferson Co., N. Y.*

Artificial Stone Block for Building.

Messrs. Editors—I wish to get accurate and concise directions for preparing and mixing the mortar for "artificial stone," or "concrete blocks," spoken of by "J. E. S.," on page 109, vol. 5, of The Cultivator. Cannot some reader of your papers, who has had experience, give us a little more "light" on the subject?

If the "concrete" plan of building really has the advantages claimed by "J. E. S.," it ought to be fully discussed, and accurate directions given for preparing it.

How are "composition roofs" for buildings made? What materials are used, &c., and what advantages do they possess compared with shingled roofs? A. Babcock.

Union Co., Ill.

J. E. S. has given minute directions in the communication referred to, for every part of the operation but mixing the materials. We should say, take the best lime and mix it into mortar, with at least five or six times as much sharp, coarse, clear sand, the best for hardening perfectly. If a larger portion of lime is used, as some masons like, because it then works and spreads more easily, it will never become so hard—and an obstinate, ignorant mason will be sure to spoil the work. The success of this mode must depend upon the perfect hardening of the blocks. When the mortar is made, fill the boxes which are to give shape to the blocks, intermixing it during the operation with broken stone, small stone, &c., of all sizes, getting in as much stone as possible, for two reasons—first, they assist the hardening of the mortar, and secondly, they reduce the expense by diminishing the amount of mortar needed. But every interstice must be perfectly filled with mortar.

What we most want is the *result of experience* in this mode of building. J. E. S., as we understand him, only proposed it—had not tried it.

We should esteem it a favor if some of our readers who are familiar with all the details of the manufacture of composition roofs requisite for success, would give us the desired information.

[For the Country Gentleman and Cultivator.]

The Perennial Phloxes, &c.

Roses and Verbenas are considered as indispensable in every flower garden, be it ever so limited; and next to these, perhaps the Asters excepted, come the Perennial Phloxes. They require a deep, rich, moist soil, to fully develop their beauty. The varieties are numerous, and some of the new French varieties are really splendid. The best six, are:

Madame Soeur, white, purple center.
Surpasse Madame Rendatler, white, purple center, perpetual flowering.
Augustine Lierval, white, pink center, perpetual flowering.
Madame Audry, white, tinged with rose, violet center.
Juliette Roussel, white, purple center.
Rigolo, lilac and violet, mixed with white and red.

The cultivation is easy, and being perpetual they require but little care except annually manuring the beds, and when the clumps become too large take them up and divide them. They are rapidly propagated by cuttings in the spring or by division of the roots. The flower garden can be beautified by a judicious selection of varieties from July to October, and what renders them more valuable, they flower at a season when our gardens are nearly destitute of blooms.

The Phlox Drummondii is an annual, and also very beautiful, and dwarf in its habits, and suitable for large masses. Indeed, except the Verbena, we have no flowers so showy for a large bed as this one, with its various hues and tints, seldom finding two bushes bearing flowers alike.

In large yards or gardens the Dahlia is equally indispensable, and the Aster is of sufficient importance to have a chapter for itself. William Newcomb.

Rensselaer Co., N. Y.

SQUASH BUG.

Can the editor or any reader of The Cultivator give a convenient and infallible remedy for the large brown squash bug? The kind of bug I speak of is of a dirty brown color, and emits a disagreeable odor, especially when disturbed or killed. This bug is a great pest to squash growers in this region, working nearly all summer upon the main trunk of the vine, at the base or near it. It also attacks the young squashes if it should fail in girdling the vine at the root. They destroyed 40 hills of Hubbards for me last summer.

Union Co, Ill. A. Babcock.

The only infallible remedy we know of, although not very "convenient," is to kill daily all the bugs that can be found. At the same time care should be taken to destroy the eggs, which are laid in little patches, and fastened by a cement to the under side of the leaves. A daily examination will not consume a great deal of time. Next to this, we can recommend the protection of wire frames covered with gauze, or boxes set with a pane of glass or piece of gauze. This insect, (the *Coreus tristis* of entomologists,) is common everywhere, and is very destructive to squashes and pumpkins. It is important to destroy them early in the season, before their number increases so much as to render it difficult, as well as before the plants are destroyed. A good time is early in the morning, before they have concealed themselves from their nightly depredations.

[For the Country Gentleman and Cultivator.]

Putting in Spring Wheat, etc., Early.

In consequence of what happened last season in the partial destruction of the wheat crop, it may be that some farmers will feel a little timid on the subject of early sowing the spring varieties of cereals. But I think reflection will convince those who are open to the "logic of facts," that no alarm need be entertained for the comparative safety and success of early sown crops of rye, oats, barley, and especially of wheat. Usually the cold of spring is more intense, and of longer duration, in the open portions of Illinois and Wisconsin, than in the comparatively wooded or sheltered parts of Ohio, New-York, etc., in the same latitude. Yet, so far from entertaining a fear of frost-killing in the spring, the best or most successful farmers in the western States named, are now more strongly inclined to plant early, than they have ever been heretofore. The principal reason of this is, that early sown crops

have a longer season—more time to grow—and being developed more *slowly*, are less liable therefore to the attacks of blight, rust, insects, &c., that appear to be principally incident to a too rapid growth under the influence of too much heat, with other favorable growing conditions.

In the Prairie Farmer of Feb. 16th, E. Stetson, of Bureau Co., Ill., says: "The *quality* of wheat is much improved by *early* seeding. A few years since," (probably in 1853, "during an open term in *March*, I sowed a part of a field to wheat, and the balance some three weeks later. No good judge of wheat would have pronounced the product of both parcels to be of the same variety, (Rio Grande.) The product of the early sowed was transparent, of a *bright* golden color, while the late sowing was dark and flinty, like the Black sea wheat." My own observation is confirmatory of this. I have noticed much of the Rio Grande that was *late* sown, to be unusually *dark* in color—considered as to its nutritive value, it is none the worse for this; because the nutritive element gluten, gives the dark color, and this fact of late sown wheat, which therefore makes more of its growth in a *high* temperature than such as is put in earlier, corresponds with the alleged fact, that southern wheat contains a larger proportion of gluten than that of the north. But the brightest wheat is always most sought after by millers, because it makes the brightest flour, and *early* sown producing the brighter product, is, for that reason of itself, produced at the greatest profit.

But there are other advantages incident to early seeding. A crop that is put in early—other conditions being similar—will yield from 10 to 20 per cent more from each acre. I have proved this by experiment, and think it may be explained consistently with good reasoning.

In 1853 I harrowed in a piece of Canada Club wheat, sowing nine pecks—(I never allowed less than eight)—to the acre, on fair clay loam soil, on the 12*th of March*. Severe frost set in the next night, and the ground was frozen solid for eighteen or twenty days. The yield was 27½ bushels per acre; quality bright and good. Last year I sowed 24th of March, with a fair result for the season.

Now, as I maintain that every fact has a theory in nature—if reason can only find it out—it may be well to look to the remote causes of the superiority arising from early seeding. To do this, we must premise that the absorbent capacity of roots and branches, is as much limited by natural conditions and laws as size itself. In fact, it depends much upon the extent or size of a plant, as to the rate of growth it can make in a given time. There can be so many openings or pores, to admit the substances of growth, of a certain relative size in a root or leaf, of a given dimension or area. In favorable weather, a certain quantity of the elements of growth can be absorbed by the plant organs in an hour or a day, as much as the interior spaces are fitted to contain and digest, but the limits of this interior capacity—which varies as the structures of plants expand and contract under the influence of heat and humidity—at a given time, cannot be exceeded. A plant can no more digest a two days' supply in a single day, than I can digest two or three meals in the time naturally allotted to one only. And as the digestion, or assimilative functions of plants, largely depend upon the degree of heat and humidity, and the latter control the supply of organic plant food also to a great extent, the plant, unlike some other beings, takes in only as much as it can transform naturally and efficiently. The working powers of plants, those by which they absorb and grow, are, then, limited to the absorbtion and transformation of a given proportionate amount of earth and air within a given period. Though they grow seven days in a week, they will not make two days enlargement in twenty-four hours, because *light* is an essential of growth. If the capacity of growth within a given time is limited, then so also is the proportion of time in which growth may take place. We have therefore no reason to expect either as much or good growth, or as large and good quality of yield from late sown crops, as from those that are put into suitable growing conditions in the earliest part of the growing season.

It being impracticable to cover seed, or put it *in* well, till the ground is dry enough, putting in seed too early is generally impossible. The same degree of heat, or thereabouts, that will make grass grow, will, when the ground is not too wet, be sufficient to make wheat also germinate or grow. But, according to the *facts* which govern growth—"facts" giving the conditions upon which laws or rules are predicated—time is also essential to the plant work of large and excellent growth, as are absorption and transformation of the elements of its structure.

Growth that is made *early* in the season, is necessarily more compact, weighs more per given bulk than that made later in a higher temperature. The straw of early sown wheat is therefore stiffer, more perfect, and better adapted to its part, the subsequent formation of perfect seed. Superior tools for superior work. The seed will not only ripen earlier, but will be of better quality; superior produce of natural work. To expect the best crops of spring wheat, and the same is true of oats, rye, &c.—with good reason, then, we must sow early to give *time* for the natural work of the plant, as well as other conditions necessary to satisfactory results. J. W. Clarke.

Green Lake, Wis.

[For the Country Gentleman and Cultivator.]

CULTURE OF RUTA BAGAS.

Eds. Co. Gent.—Having been impressed with the influence of the root culture in British Agriculture, I induced my farmer, Mr. H. Jones, to cultivate last season one acre of Ashcroft's Purple Ruta Baga. The cultivation was as follows:

Ground plowed previous fall—clover sod of three years standing. In the spring well harrowed. Drills 30 inches apart, opened by a double furrow. A sub-soil plow run through in the bottom of the drills. About 12 wagon loads of barnyard manure then spread evenly in the drills. On this, spread 8 bushels of bone dust mixed with 16 bushels wood ashes; then covered drills by two furrows and sowed about 25th May, with Emery's seed drill, 1½ lbs. seed on the ridge. The turnips came up remarkably well and even. In due time they were weeded and cultivated fairly, but no extra labor, and I regret I have not the cost of this labor. The grasshoppers trimmed them pretty sharply in July and August, but they had got so well on that I do not think they did much harm. The crop was very even, and the tubers mostly ranged from 2 to 6 lbs., and some weighed over 10 lbs. The land was in about medium condition, sandy loam and some cobble stone.

We harvested 940 bushels, or about 28 tons net. They were stored for winter use in a barn cellar. I had my cellar partitioned into sections about 10 by 12 feet, the bottom and sides of lath 1 by 3 inches, so that the air circulates freely around the bottom and sides of each bin. They are now mostly fed out. Not a root has been injured by frost or other cause of decay. You will understand, the quantity of land was not guessed at, but accurately measured. John W. Jervis.

Oneida Co., N. Y., Feb. 15, 1860.

An Old Subscriber.—In 1833 I commenced taking the "Genesee Farmer," Vol. 3, (I wish I had 1st and 2d vols.) and have all of its subsequent volumes bound. Also the "Cultivator," complete from its commencement bound, until the Country Gentleman was commenced, since which I have that carefully preserved and bound. Together with other similar works, they form a most valuable library, interesting to every one, especially the farmer. To me it is surprising that so few preserve their papers. Surely a paper that is worth taking and reading is worth preserving. I know of no way that so cheap and valuable information can be procured, as through our several agricultural and horticultural publications. They are and have been exerting an influence for good to all classes of our country, that is not appreciated, and cannot be easily estimated. Success to your efforts. James McLallen.

☞ The Eleventh Annual Fair and Cattle Show of the Brookfield Agricultural Society, will be held on the 26th and 27th days of September next.

[For the Country Gentleman and Cultivator.]

HOW TO MAKE FARMING PAY.---No. II.

Necessity of Capital and a Knowledge of the Business—My own Experience—Cut Fodder—Protecting Animals and the Pecuniary Value of their Flesh if lost.

Farming, in one point of view, is not unlike some other occupations, and therefore in order to make it pay a fair profit, it is of the first importance that a farmer should *start* corectly.

When a man engages in the mercantile business, or opens a manufactory, he makes himself acquainted with, and, in a measure, master of his business. He feels that it is a very important consideration to have some *capital* to commence with. Who ever heard of a man opening a store, who had not first acquired some practical knowledge of the duties, &c., of a merchant. It is always desirable and very important, when engaging in any business, to have a good capital to begin with. And this is particularly true with regard to farming.

The first step, then, towards rendering farming a paying business is *a good agricultural education.* No man can expect to succeed in the cultivation of the soil who does not have a good understanding of the various operations of the farm. A farmer in order to succeed well in the cultivation of his soil must have some knowledge of soils —of their characteristics—and what system of management will *improve* them, and what will *impoverish* them. A man may become a very good shoemaker or joiner in one or two years, but it requires more than one decade of years to make a skillful, intelligent, and successful farmer, who will be capable of managing the affairs of even a small farm with discretion. The operations of a farm are so manifold that a farmer, if he expects to succeed in his business, must have a good smattering of agricultural chemistry, a good knowledge of mechanics and of the principles of draught, and of the laws of force and motion. People were once accustomed to think that if a boy or man was so unaccountably stupid that he could not, or would not, make a skillful mechanic, *he must be a farmer.* But there never was a more egregious error. Experience demonstrates, most conclusively, that the veriest clod-hopper in the land may succeed tolerably well in life if he serves a good apprenticeship at some one of the mechanical arts, and that were he to live coeval with the sun, he never could succeed in farming so as to *make it pay.*

In addition to education, a farmer must have some capital, as has just been observed. If a young man has a little agricultural education and but a few hundred dollars capital he may succeed tolerably well, providing he gets a good farm, and is an energetic, thorough-going man. But no man ever expects to succeed in mercantile business, or in any kind of manufacturing occupation, without having some considerable capital to commence with; nor can a man expect to move along in farming with a very small capital any more prosperously than one can in the mechanic arts with a very limited capital. It is not impossible—indeed it is quite practicable—to make farming pay a good interest on *borrowed capital*; but as a general rule it would be considered rather uphill business.

Dropping the discussion of these theoretical questions, I propose now to show how to make farming pay when the farm is a poor one, and the capital is very limited. And I know not how to do it in a more satisfactory manner to the readers of the Co. Gent., than by recording my own experience in the matter. Farmers always desire something *tangible* to aid them in their manual operations, and we all esteem a short article which tells us *what has been done*, *what is very practicable*, and *what may be done again*, more highly than we do a large volume which is replete with the most plausible theories.

I commenced farming on about thirty acres of plowable land. Most of this was old land, and the greater portion of it had been plowed and sowed ever since it was cleared up, and the produce had been carried down the Cayuga lake. Different owners had worked it themselves and rented it to different tenants every year since the country was settled, who had carried away from it everything that grew, without ever thinking or caring to *return* anything to it in the form of manure. Crop after crop was grown on it without any manure, until, in many instances, it was a matter of doubt whether the avails of a crop would repay the expense of simply harvesting it.

During the first season of my career, from eight to ten bushels of wheat, about eighteen or twenty of oats, and about eighteen bushels of Indian corn, per acre, was my average crop. It required nearly three acres of pasture per head, to keep my horses and cows during the summer. From ten to fifteen hundred pounds of hay per acre, was the maximum quantity; and in many places, the grass was not mowed, because it was so poor it would not pay for mowing. The result was, before the return of pasture, I was running about the neighborhood, like many of my neighbors, to find a little hay. My grain was threshed with a two-horse machine in autumn, and the straw thrown out of doors; and the consequence was, before winter was half gone, my straw was all used up.

I had always been instructed when plowing, not to turn up any of the subsoil, because "it was barren and cold, and would *spoil the soil*;" and as there was not a rod of drain on my farm, and as the soil had been only *skimmed over*, I came deliberately to the conclusion, that such a system of management would never answer for me; and the conclusion was, that a new leaf must be turned over.

The first thing then, was to adopt a system of management *which would give an increase of crops, from year to year, without purchasing foreign manure, or without impoverishing the soil.* Believing that such a system of management *is practicable*, the question arose, *how* am I to accomplish such an object, or how shall I render my plans *progressive*—tending to the end in view?

Now, if a system of management could be adopted which would obviate the necessity of purchasing hay to keep my stock through the winter, one very important step would be taken towards rendering farming *progressive*—or a paying business. In this dilemma, I procured a railway horse-power and thresher, and horse straw-cutter, and as soon as winter set in I commenced threshing my grain. After threshing a few hundred sheaves, the straw was cut up with a little hay and some cornstalks, and moistened with water and a little meal applied to it; after which it was fed in mangers. I did not wait in autumn, until my animals had begun to fall away in flesh before I commenced feeding them cut feed, but as soon as they did not seem to fill themselves well in the field, they received one or two feedings per day, as they seemed to need. In this way all the straw was used up in the most economical manner, and every spring, since I adopted this course, I have had hay to sell or to keep over. But in case I *did* sell any hay, I always made calculations to purchase more manure to return to my fields than could be made from the hay sold, if it had been fed out in my own yard. To cut this subject short, I may be allowed to say, that I have followed up this system to the letter until the present time; and I know that I keep more animals on the same quantity of fodder, and keep them in better condition than they do who do not cut their fodder.

Another very important step towards making farming pay, was—and it is true even at the present day—to provide comfortable sheds and stables for my animals, in cold and stormy weather.

I always considered—and do now—that every cow, calf and bullock, or sheep, is worth four cents per pound, live weight. Now then, my idea was—and it has *ever* been a rule of action with me—that if I could *retain* only one hundred pounds of cow flesh and fat per head, by expending two dollars or more per head, in erecting comfortable sheds and stalls—the fodder being always the same—my system would tend to render farming a paying operation.

Let us unfold this thought a little. Suppose we allow a good cow to lose one hundred pounds of fat and flesh during the winter—one hundred pounds will not make a very great difference in the appearance of a cow of good size, if she is tolerably fleshy—that one hundred pounds is worth, in cash, not less than eight dollars. It is in

reality, worth *more* than this; because there is no portion of bone and offal in the part that is thus wasted away. Now, during the following season, such a cow must appropriate grass enough to replace this one hundred pounds of fat and flesh, to have made one hundred pounds of butter. No good farmer will deny this fact. Now, computing the value of that one hundred pounds of butter, aside from the expense of making it at twelve dollars, which added to the eight dollars, for the lost flesh and fat, we have a dead loss of twenty dollars per cow per annum, in consequence of not having comfortable sheds to protect them from the pelting storms and the pinching cold.

My principle was then, as it now is, that in order to make farming pay, every animal must be kept in a thriving condition; consequently every one receives a regular supply of food every morning and evening, with a portion of turnips, carrots, or potatoes, until grass comes; and when the winds howl, and he storms rage, I never lay me down to rest, until *I know* that every animal has been well fed and is in comfortable quarters. S. E. Todd. *Lake Ridge.*

Buist's Dwarf Okra Plant.

The Okra plant is of the Mallow tribe, and of a southern or warm climate, though it grows rapidly, and succeeds well in the middle States. We have raised it in gardens between the 42d and 43d degree of latitude. It is valuable for the healthful and highly agreeable mucilage obtained from the fruit, which grows at the joints of the branches in the form of upright cones or pods; these are cut up and boiled in soups, and give them a rich flavor. It is necessary to take off the pods while tender, after they have attained their full size, and before they harden and ripen, which they do in one or two days afterwards. Their tenderness can be ascertained by the point of a knife, and this period of the growth of the pod must be watched, as after they become dry and hard, they afford little of the glutinous matter, and are worthless, except their seeds be used as a substitute for coffee, for which they are admirable. The *green pods* are also pickled; and are frequently dried and preserved for winter use by hanging on strings. They are even boiled like asparagus, and eaten with drawn butter.

We are indebted to Mr. Robert Buist, seedsman, Philadelphia, for the engraving given above, which represents "Buist's Dwarf Okra," which produces pods at every joint. It is said to grow two feet high, about half the height of the old variety, and its superior advantages are that it requires much less ground to raise a given quantity, being more fruitful, while the fruit is larger in quantity and better in quality.

Do good to others—it will come back to you. The water which you pour on the roots of the cocoanut tree comes back to you sweetened from the top.

[For the Country Gentleman and Cultivator.]

Cheap Paint.

Eds. Co. Gent.—I see in the "Co Gent." an inquiry for a cheap paint. Enclosed is one I sent to the "Niagara Mail" in Jan., which I *know* to be first best.

Take one bushel of unslacked lime and slack it with cold water; when slacked add to it 20 lbs. of Spanish whiting, 17 lbs. of salt and 12 lbs. of sugar. Strain this mixture through a wire sieve, and it will be fit for use after reducing with cold water. This is intended for the outside of buildings, or where it is exposed to the weather. In order to give a good color three coats are necessary on brick and two on wood. It may be laid on with a brush similar to whitewash. Each coat must have sufficient time to dry before the next is applied.

For painting inside walls, take as before, one bushel of unslacked lime, 3 lbs of sugar, 5 lbs. of salt, and prepare as above, and apply with a brush.

I have used it on brick, and find it well calculated to preserve them—it is far preferable to oil paint. I have used it on wood, and assure you that it will last longer on rough siding than oil paint will on plained siding or boards.

You can make any color you please; if you wish straw color, use yellow ochre instead of whitening; for lemon color, ochre and chrome yellow; for lead and slate color, lampblack; for blue, indigo; for green, chrome green. The different kinds of paint will not cost more than one-fourth as much as oil paints, including labor of putting on. Galloway.

Clifton, C. W.

[For the Country Gentleman and Cultivator.]

Treatment of Burns.

Messrs. Editors—Flour has been extensively recommended for burns; but seeing it tried several times, increasing the pain intolerably in every instance, I would not use it, nor have it used. But a short time ago one of my family was scalded on the hand quite badly—flour was first applied, but could not be borne. Next the skin of hog's lard was applied, which relieved the pain almost at once, and entirely. If the skin of lard cannot be had, oiled silk would be a good substitute. If you can make use of the above to relieve a moment's pain, you and I will have our reward. P. P. Peckham.

[For the Country Gentleman and Cultivator.]

Pie Melon and Ground Cherry.

Eds. Co. Gent.—I see much is said about the Japan Apple Melon. I raised some last season and find them a good substitute for apples to make pies. They also make good preserves and sweet pickles. I have two on hand now. My largest weighed 35, 37, and 46 pounds.

The Ground Cherry I have cultivated for two years. They make a delicious pie and very nice preserves, and are very palatable to eat when ripe. They are easily cultivated, and yield abundant. I think them worth cultivating; they keep until mid-winter. P. Whittlesey.

Wallingford, Conn., Feb. 3, 1860.

Cooking the Sweet Potato.

In a late no., I noticed an article on the culture of sweet potatoes. Now I will tell you two or three ways of preparing them for the table, besides baking, steaming, &c.

1. Potato Pudding.—Wash the potatoes, peal and grate them, (using a large coarse grater,) then take of the grated potato, eggs, butter, either sugar or molasses, (the latter is best) and milk sufficient for a batter—bake in a deep dish without crust—stir two or three times whilst cooking, and then bake brown. Flavor as desired.

2. Potato Custard.—Boil the potatoes, skin and mash them—then with the mashed potatoes, butter, eggs, sugar and milk, make a batter and bake with one crust in a shallow dish. Flavor as desired.

3. Potato Pie.—Peal the potatoes, slice—take sugar and water sufficient to make a syrup to cover the potatoes, add a little butter and some spices, and cook until the slices are softened—then make into pies with two crusts.

4. Fried Potatoes.—Peal them, slice and sprinkle with a little fine salt, then fry till moderately brown, in butter or lard—if in butter, no salt is needed.

We depend very much upon sweet potatoes for fattening pork—on our sandy lands. The red and yellow varieties are much planted, but the Spanish is much preferable for table use. This kind is rather dry and insipid when first dug, but upon exposure to the air, becomes very sweet and even syrupy. W. Nicholson. *Perquimans Co., N. C.*

AGRICULTURAL EDUCATION.

☞ The subject of Agricultural Education for American purposes, is one to the difficulties of which we have heretofore referred, while for the present generally contenting ourselves with a simple record of the efforts made toward their solution. The latest of these, the Agricultural Lecture Course at Yale, we announced some months in advance of its appointed time, and by subsequently recurring to it as occasion offered, we endeavored to do our share towards attracting thitherward the steps of the farmers of the country. Which endeavors, by the way, appear to have at least created a strong desire for the publication of the Lectures delivered—a matter quite impracticable as well as impolitic—the former, because much was said that was wholly or partly extemporaneous, and because what was written is the individual property of the writers, who may require it for other uses—the latter, from the simple reason that the course is to be an Annual one, and that much of the inducement to attend will be lost, if it is anticipated that for a Dollar or two we can subsequently purchase the whole in print. Nor is this a selfish consideration on the part of the directors—the great value of such a course lies in its drawing together as large a number as possible from all sections of the country—a source of usefulness at once discarded if the chief source of attraction is put in hazard.

Farmers peculiarly are of that class, to whom, according to the scripture, "faith cometh by hearing." Nine out of ten who would refuse to read, or pay no regard to anything they should read, would perhaps receive the same information or item of experience from the lips and voice of a neighbor as an immediate lesson to themselves.

Hence it is that the Discussions are becoming so important and interesting a part of our Agricultural Meetings and Shows. While a whole evening expended in this way, may witness the utterance of much more that is random and unqualified where accuracy and limitation are especially necessary—of much less either in amount or variety that is practically useful as a contribution from actual experience, than any one number for instance of the Co. Gent., may possibly afford, there are not a few who would enjoy the one away from home better than the other at their own fireside, and perhaps receive from it a degree of benefit greater in proportion to the greater attention awakened and thought bestowed.

From a notice elsewhere of the concluding address of Prof. Porter at New-Haven, it will be seen that another year the Lectures there are to be renewed with still greater efforts to render them effective of good. Such a course has the advantage over ordinary discussion, of presenting the observation or the experience of careful and trustworthy men, *well-matured for the occasion*, and subsequently overhauled and sifted by questions and by debate. Yale College, as a center for such a convention, renders New-Haven a prominent point by its high scientific and educational standing, and the proposed establishment of an Experimental Farm will also add to the advantages of the place. But it is not an idea of which Yale is destined to retain the monopoly. The propriety of taking some measures of a similar kind, during another Annual Meeting of our State Agricultural Society in this city, has already been mooted, and the example of our Connecticut friends only requires a little more testing to be extensively imitated. The *Herkimer Co. Journal*, published at Little Falls, in this State, comes to us with the following sensible suggestions:—

> Yale is doing what might be done here, on a smaller scale; but with great advantage we think to our Young Farmers.
>
> A course of Lectures on Agriculture should be delivered at our Academies and Seminaries every winter. A considerable number of young men from the surrounding country go to School at the Academy only during the Winter Term. To these a course of Lectures on Agriculture from practical men would be invaluable, as it would stimulate them to look deeper into the subject, and thus lay the foundation of future improvement and success.
>
> Nor need these Lectures be expensive. There are practical men in the several departments of agriculture to be found in our own County, who are capable of giving a first class lecture, on some particular branch of the subject. Let a dozen such men be engaged, with perhaps a few from abroad, and we have no doubt this feature alone in the Programme of Academic Education, would awaken an interest in our schools throughout the community, which would amply pay all expenses for lectures.

[For the Country Gentleman and Cultivator.]

CULTURE OF FLAX.

Eds. Country Gentleman—I have had considerable experience in flax culture during the last 28 years. Large quantities are raised in my section of country, and having two flax machines on my farm, and also a factory for spinning flax into shoe thread, carpet yarn, twine, &c., has necessarily given me considerable experience in this crop.

Flax requires upland, and a loamy soil, or a loam with gravel or sand, or a clay soil if it can be in season put in proper tilth. It does not, like corn, thrive well on a sward ley, but succeeds best after corn, and tolerably well after potatoes. It requires, like most other crops, to be got in in good season. From various experiments, I find one bushel of seed to the acre the best, where we unite the seed and lint for the profits of the crop. The ground must be made mellow with the drag before sowing the seed, and dragged as lightly as possible after the seed is sown, for very little if any of the seed will grow if deeply covered.

The ordinary yield is from 8 to 10 bushels of seed and from 250 to 300 lbs. lint.

In former years much flax was water-rotted, but from the fact that the U. S. Government has not patronized, for the last 15 years, the making of duck for the navy, there has been but little demand for water-rotted flax, and this method has been abandoned. It is now, after the seed is off, spread on grass lands, thinly and evenly, and dew rotted. It gives a trifle more weight by dew rotting.

The expense of the crop until harvesting it, is about the same as oats. In pulling the flax, which must be done if you wish to save the lint, a fair hand will pull his acre in three days. I had 55 acres pulled by hands at $1 per day, at an expense of $2.75 per acre. The seed would average one year with another, about $1.50 per bushel, and the lint about 10 cents per lb.; but the past season the price for good flax has been 15 cents per lb.

The flax crop is usually taken by the mill men when pulled, from the farmers, but where the farmers take care of their own flax they can get it dressed and fitted for market at $2 to $2.50 per 100 lbs.

If seed only is the object in sowing, from one-half to two-thirds of the quantity ought to be sown; and if the lint only is the object then one and a half bushel of seed is not too much per acre. In Europe double the last quantity is sown, but in every experiment tried in this country, where three or four bushels per acre have been sown, it has proved an entire failure of the crop. I handled a crop of two acres and seventeen one-hundredths, raised by a neighbor the past season; although this was rather an extraordinary crop, the sales of seed and lint amounted to $195.19, and the whole expense of the crop was a little over $40, leaving a net profit of nearly $70 per acre. The amount of flax raised in the United States does not approach near the consumption, and very large amounts are annually imported. The statistics of New-York in 1855, show near five millions of lbs. of lint raised in this State, but the numerous impossibilities there stated, render the returns useless for any calculations.

The only difficulty in raising this crop is the bulkiness of the product, which will not allow of transportation to any great distance; consequently it can be profitably raised only in the neighborhood of flax mills; but when once dressed, it will bear transportation to any point for a market. William Newcomb. *Rensselaer Co. N. Y.*

South Downs.—Mr. J. C. Taylor, Holmdel, N. J., has recently sold several South Down rams, to go to California. Among them, one to Messrs. Crosby & Dibblee, whom they named "Golden Fleece." He was from the imported ram Frank, bred by Mr. Webb, and a Webb ewe, bred by Col. Morris—was of large size and heavy fleece, having sheared 8 lbs. when a yearling. These gentlemen are going into sheep raising extensively, having a "ranche" of over 13,000 acres near Los Angeles. He has also sold several ram lambs, all got by his noted "World's Prize" ram, to Mr. Stanwood of Sacramento.

Writing for the Papers.

☞ "Probably," writes an esteemed correspondent whose letter is just received—"when you penned the article asking your readers 'whether experienced with the pen or not,' to 'do good and communicate,' you were not aware of the amount of *talent* that would respond to the call, or perhaps you would have been less confident of not having your 'supplies overstocked.'"

Our friend is only one among many to whom our acknowledgments are due for liberal and valuable 'communications' during the past two months—large numbers of which have already been published, while many more are filed for seasonable opportunity to appear. But very few are perhaps aware of the quantity of manuscript grain, that must go into our compositors' mill to bring forth the grist which is returned to our readers. The amount of paper occupied by pen and ink in the preparation of each printed column, bears something the same relation to the regular and compact lines which this great Art compresses in bulk while it multiplies in numbers—as the pyramids to a hay stack, or the cotton 'lint' that flies loosely from the gin, to the same product pressed and baled for the market. Consequently, although not a mail arrives without bringing from widely scattered sources, some contribution or other to our stores, the ever recurring draft they sustain is so great, that we are scarcely more apprehensive of 'overstocked supplies,' than we are that all the farmers of the land will simultaneously put in practice the doctrines we are teaching, and spoil the 'profits of their business' by the immense crops and consequent low prices that would ensue.

This remark recalls one consideration which, although very old in our own mind, has perhaps never been expressed in so many words. One of the most successful and thorough-going florists and plant growers whom we ever knew, now—if an exemplary life ever deserved such reward—at home where

— — "the forget-me-nots of the angels"

require neither culture nor human care—when asked to describe in print his methods of propagation and growth, used to answer with native shrewdness, more generous always of his money than of the secrets of his trade, "Let others find out for themselves, as I did."

There need be, however, no fear in telling all the secrets of nature or art that one can learn, either in Agriculture or Horticulture—arising from any danger that too many will at once rush into the ranks of improvement. Men, like children, require "line upon line, and precept upon precept." And we do not hesitate to say that our correspondents may send us the fullest particulars of all the experience they have gained or any discoveries they may have made, without the slightest peril of thereby creating injurious competition in farming or gardening. If we should publish this month, in the way of an ordinary editorial or communication, a perfect and complete specific against the wheat midge or the curculio, we doubt if the price of plums would be a cent lower in the New-York market next autumn, or if their daily bread could then be purchased any cheaper by the consumers of that metropolis.

This is the case because important changes for the better or worse resemble almost invariably the forest which old Time rears to gradual maturity, rather than the gourd that sprang up in a night for the prophet. Of a hundred who should try either of the specifics we have suggested—if indeed there were so many who would go beyond the casual remark—"Well now, that looks reasonable enough,"—probably a number would fail in the care requisite to ensure a fair trial; others might tire before the process was complete; only a very few would verify its correctness by ultimate success.

Perhaps it will be thought that we place too low an estimate upon the enterprise—nay, even upon the common sense of our readers, in such statements as these. The truth nevertheless is unmistakable; nor will it seem as strange, as it might at first be regarded, if each of us—whatever his position or pursuit—should soberly ask himself the question, "Has my life invariably been in accordance with the dictates of reason—have I never failed to grasp an opportunity of improvement?" The calculation was not very long ago presented as to the money value by which the lands of this State might be increased if they were all properly drained; to which some thoughtful objector responded by saying that when our territory was all thus put in order for tillage, there would be no market for its immense production. He need have given himself no uneasiness; by the time the Anti-Utopians (as a correspondent elsewhere styles them,) are all exterminated, our population will have incalculably increased, and perhaps Macaulay's antiquarian New-Zealander will have already taken his meditative seat among the ruins of London Bridge.

The moral, then, of these discursive notes, is simply as before—Let all contribute as they can to open channels of light in the dark places of our farming; out of much discussion, here and there shall we prompt to some real and tangible advance, and the example of one successful man will exert an influence upon others in constantly widening circles. A careful thinker, as well as thorough practical farmer, said in our office the other day: there have been just as good farmers among our fathers as there are now—just as careful observers, just as earnest thinkers, just as progressive cultivators. But the great advantage of the Agricultural papers of our day is, that they bring to light what this class of farmers can accomplish; their example, which formerly appeared to their neighbors as merely an instance of good luck, is now thoroughly sifted and discussed; the measures of advancement they take are disseminated and pushed on, instead of going with them to their graves. "I perceive," he added in effect, "a constant and remarkable change for the better, precisely in this direction, in your publications; you are continually drawing out the experience of those who have not before written, and as I never met a man who could not tell me something, so there is not a number issued that contains nothing to ponder and nothing to practice."

[For the Country Gentleman and Cultivator.]

Brussels Sprouts.

This variety of cabbage is supposed to have originated from the Savoy. It is a celebrated vegetable in Europe, especially near Bruxelles and other large towns in Flanders, where from October to April, it is an every day dish on the table of both the rich and the poor.—*Buist's Kitchen Garden.*

Wherever this fine vegetable will stand out of doors during the winter, it is invaluable, as furnishing a rich vegetable fresh from the grounds. Where it will not, as in these northern latitudes, an excellent way is to give them a pit, where they can be preserved in all their freshness. We recently saw at a neighbor's, a pit full of these little cabbage, from which the gardener supplied the family. They are simply taken up just before winter and planted in these pits, and covered with litter in extra cold weather. EDGAR SANDERS.

PLANTING SUGAR ORCHARDS.

In regard to planting sugar maples on stony hill-sides, recently noticed in this paper, (Co. Gent. Feb. 2, 1860,) a correspondent of the New-England Farmer remarks:

"I have a sugar orchard on the top, and just over the east side of a hill, and I think it yields more sap and of better quality than on level land, and the leaves not only keep the land on which the trees stand in the highest state of fertility, but a nearly equal area on the side of the hill below is kept in quite a productive state; and this land being sheltered by a belt of timber on the south, and by high hills on the opposite side of the valley, east and north-east, I have planted a small orchard of apple-trees upon it, and by throwing brush on the land to catch the leaves, I succeed in getting a better growth than on another orchard on good level land well cultivated."

The same writer remarks upon the known variation in the quality and quantity of sap yielded by maple trees of the same size, and suggests the trial of experiments to ascertain whether this superiority could be propagated by grafting seedling trees from the best sugar yielding sorts.

THE CALF QUESTION---A GOOD BARN.

Calves should be Raised, not Sold—Cost of the Milk they Consume—Mr. Thayer's Way of Saving $14 per Head—The Stock of Mr. Sawyer and Mr. Davis—Description of Mr. Sawyer's New Barn.

MESSRS. EDS.—Under the above caption, a "Maryland Farmer" has an article in the Co. Gent. of 5th of Jan., in which he gives his views and method of raising calves. To this, Mr. Pettee, in the Co. Gent. of 19th, replies, and gives the weights and price of calves in his section of Connecticut, saying that at six weeks old, good calves will weigh from 150 to 180 lbs., and bring from six to seven cents per pound, live weight. The average weight then, is 165 lbs., and average price six and a half cents per lb., live weight; these figures make the average value of the calves $10.72¼. This looks like a large price for calves six weeks old. In saying so, I do not in the least call in question Mr. Pettee's statements. But there is another view to be taken in connection with this question, by all those that can readily sell their milk at four cents per quart. (I have been selling milk all winter at five cents.)

To fatten one of these large calves, it will require upon an average at least eight quarts of milk per day for the six weeks—that is, forty-two days. Eight quarts per day for forty-two days, is 336 quarts, which at four cents a quart, amounts to $13.44. The calf at three days old will sell for a dollar at least, making $14.44, instead of $10.72¼, for the calf at six weeks old. And I think it will be much better for the cow to be milked, than to be suckled and punched by these large calves.

Mr. Pettee further says, he has in two or three instances sold calves who have run with their mothers three months, for $15 to $20, which he considered the most profit he could get from the milk. To many, $20 for a calf three months old, would be thought a great price. But in the New-York cattle market, 29th of December, a premium calf four and a half months old, weighing 650 lbs., sold for $47.50, or 7⅓ cts per pound, live weight.

A certain number of calves must be annually raised, to replace, in time, the cattle slaughtered for beef, and otherwise disposed of; and it should be the study of the farmer to ascertain the most profitable method of keeping up this supply. But farmers differ widely in this matter. Mr. Pettee thinks it better to sell his calves for veal, and purchase store calves in the fall from drovers, who obtain their stock in Northern or Southern New-York, where there is no such demand for veals. The "Maryland Farmer" thinks it more profitable for him to raise his calves, and gives his reasons therefor. These reasons, as well as those of Mr. P., are before the readers of this paper, and I leave it with them to draw their own conclusions. But in connection with the foregoing, I will give the method of raising calves by two other farmers.

In Colman's 2nd Report of the Ag. of Massachusetts, is a copy of a letter from Minot Thayer, a farmer of Braintree, to Mr. C., on "Raising Calves," which says: "In answer to your inquiries respecting the mode which I have adopted in raising cattle for ten or more years past, I can merely say, those that I have raised within the above time, have not cost me more than one-quarter part as much as those I formerly raised. They used generally to be with the cow from eight to ten weeks. The usual quantity of milk they took, was about eight quarts per day each; the common price of milk has been twelve and a half cents per gallon, and four cents per single quart, and more sold by the quart than by the gallon. Upon calculation, you will see that it would cost about $17, upon the lowest price of milk, to prepare a calf to go to pasture.

"Another difficulty which arises from letting the calves take the milk from the cow, is when you turn them to the pasture they are very uneasy, continually bawling after their mother, eat but little, and fall away in flesh, and are often stinted. The expense of raising them in the old way has been so much that scarcely a single calf is raised in this vicinity. Consequently our farmers have bought their young cattle from droves from different parts of the country, and have had no opportunity to select the breed, the result of which is a *miserable breed of cattle.* Now sir, the method which I have adopted (with great success) is: I take my calves from the cow when three or four days old. I take a small quantity of good English hay, and make a tea from it; I add a small quantity of milk, and a very little molasses to it. The calf drinks it freely, and very soon becomes very fond of it, and having got the taste, will eat hay at three weeks old with as much eagerness as a calf will usually eat grass at ten weeks old. As they increase in age I decrease in the quantity of milk, unless I happen to have a large quautity of poor milk. I make the tea pretty strong, and give them about as much as they would usually require of milk twice a day, with a few carrots cut up fine, and also as much good hay as they will eat. The hay the tea is made of is not lost, as the cattle will eat it all. I think a calf may be raised till it is ten weeks old, in the manner I have adopted, for the small sum of three dollars; the trouble is but trifling. I have no difficulty in selling my cows from fifty dollars to a much higher price."

The above, somewhat abridged, is Mr. Thayer's method of raising calves, and a very similar plan is pursued by many farmers in that section of New-Hampshire where I reside.

This morning (26th of Jan.) I rode four miles to call upon one of our young, enterprising farmers, to take a look at his last spring calves—and other stock. Some ten months ago, cows were readily saleable here at a good price. This farmer (Chas. P. Sawyer) sold all but two; these calved in March, and he also purchased six more calves when they were three days old, for which he paid one dollar each. The eight calves were raised mostly on hay tea, the skim milk of the two cows was mostly mixed with the hay tea, which was given them night and morning—at noon they were fed with a porridge. They are now a very fair lot of calves, quite as good as are those that take the milk from the cows for eight or ten weeks. He has recently refused ten dollars each for two of them. Two years ago the coming spring he raised fourteen calves on three cows. He now has two calves, a few weeks old, for which he paid one dollar each. At this time he has only a farrow cow that gives milk—yet these young calves look as well as those do of the same age that suckle the cows. Mr. Sawyer has made money by raising young stock, and other branches of farming, to which I will again allude. I also called upon Paine Davis, another of our intelligent young farmers. At the commencement of winter he had fifty-one head of cattle; since which he has sold 4 oxen, 8 two year old steers, and 4 calves. He now has 35 head of cattle, eleven of which are last spring calves—four of them he raised. Late in the fall, some thirty miles north of this, he purchased eleven last-spring calves; for these, upon an average, he paid $3.75. The four he raised, and the eleven purchased were raised upon skim milk, hay tea, &c. Another of our farmers raised eleven last spring, having for them only the milk of three cows. It is my impression that the calves that take the milk from the cows, if they have a full supply, generally *look better*, when turned to grass at the age of ten weeks, than those do that are brought up *by hand.* But according to Mr. Thayer's figures it costs about $17.00 to raise a calf on the cow to the age of ten weeks, and only about three dollars when fed on skim milk, hay tea, &c., making a difference in the cost of a calf ten weeks old of $14.00. Difference in location, or the place in which different farmers may reside, the price of butter, milk, veal, hay, pasture, &c., are matters that each farmer should take into consideration in the disposal and management of his calves. In these matters he should "apply the sober second thought." What might be profitable in one place for A, B and C, in the management of their calves in their section of country, might not prove so for D, E, F and G, in their section.

In the Co. Gent. of the 12th inst., under the heading of "Sheltering Cattle," I had something to say of our New-Hampshire barns. The past season, Chas. P. Sawyer of this town, built him a No. 1 barn, which as it has some peculiarities about it, I will attempt a description. It is 80 by 40—18 feet posts; every stick of the timber was sawed, and every part built in the most thorough manner. There were 50,000 feet of timber, boards and plank (board

measure) used in its structure—nearly all of which was of white Norway and yellow pine; 30,000 of No. 1 pine shingles were used in covering the roof the barn and an L part, which is 40 by 16; also six thousand of clapboards for covering the sides. The hovel, or tie-up, on the south side of the barn, is 80 by 14; in which thirty-six cattle can be tied up—the cattle standing on a raised platform. There are four sliding doors of good width, hung upon rollers, opening from the yard into the hovel, which is well lighted with several sliding windows, of large squares of glass—(not the little 7 by 9 lights.) There is a cellar under the whole, (80 by 40,) the walls of which are of split granite. The south side and ends, only, of the cellar are walled; the back side is boarded and clapboarded from the eaves nearly down to the bottom of the cellar. In this large cellar there is neither "post nor pillar." The floor timbers, sills, &c., are all supported by numerous round iron rods passing through the sills, girths, beams, and rafters—these last are double. The cost of the iron was from $75 to $80. After his barn was well filled with his hay, grain, and corn crop, the floor had settled only about two inches. The lower part of the L is used for calf-pens and a few sheep. The upper part for his fowls; the chamber is well lighted, and the fowls have the range of the cellar—for which they appear to be very grateful. He has 22 hens, all except one are last season pullets. From the 1st day of Jan. to the 24th, he has sold twenty-eight dozen eggs. They lay upon an average, fifteen eggs per day.

The cost of his barn, without taxing anything for his his own labor and that of his oxen, nor reckoning anything for board of hands, &c., foots up $1,200. To spout the eaves and paint the barn, will add another $100 to the cost. Mr. Sawyer, by fourteen years' labor, has fully settled the question that money can be made by farming, even here, on the almost worn-out farms of the "Old Granite State." He is no believer in what is termed "luck;" but he is a firm believer in the necessity of the farmer's exercising care, diligence, and a love for his vocation, if he wishes to succeed in his business.

Warner, N. H. LEVI BARTLETT.

COVERING TENDER STEMS.

"I observe that directions are often given for covering tender grapevines, raspberries, &c., with only two or three inches of earth. How can this be of any use, seeing that this covering freezes as solid as stone, and the frost often goes down a foot lower? A NOVICE."

Protection of half-hardy stems does not have so much influence on the actual temperature, as in modifying changes. If for instance, a young peach tree is dug up for transplanting, and while the roots are out, it is frozen stiff. If set into the earth before any thawing takes place, the tree will not sustain any injury; but if it thaws in the air it is ruined. The difference is entirely owing to the manner in which the frost is abstracted. This result is obvious if we look at young nursery trees—the roots of which are frozen *in the* earth and thawed again, every winter. A covering of an inch or two of earth is sufficient to alter wholly the effects of the thawing on the grapevine or raspberry-cane. Some difference has often been observed by fruit growers, even in the manner in which plants are thawed in the open air. If, for example, after an intensely cold and clear night, the morning sun bursts out and produces a sudden warmth, the destruction of the parts is much more complete than if the change is gradual through the influence of a mantle of clouds. Gardeners have often observed that box edging, if shaded by a building, will be fresh and green in spring; while, if exposed to the full rays of the sun after a hard freezing, they will be turned brown or killed. The shading of buildings or steep hills on the east side of fruit trees, has sometimes saved the crop, the cause of the loss on adjacent trees not thus protected, being erroneously attributed to *east wind* instead of the morning sun.

The common practice of covering the stems of tender shrubs with straw is a further illustration of the same principle. An inch or two of straw could not of course keep the tree actually warmer while the thermometer is ten degrees below zero, and the wind sweeping through it for twenty hours; the protection it affords is not unlike that given by the thin coating of earth, but less efficient. Evergreen branches operate partially in the same way.

Raising New Sorts of the Strawberry.

Will you inform me how I can raise new kinds of strawberry best from the seed? A. W.

Plant the fresh newly washed-out seed, a fourth to half an inch deep in very rich and finely pulverized beds, and keep the surface moist and shaded. Many new plants spring up spontaneously in bearing strawberry beds, from the fallen and decaying berries, and thus excellent sorts become mixed with poorer. The strawberry is the easiest fruit to raise new sorts from by crossing. For if the bearing sort which produces the seed is a pistillate, it must be fertilized by some staminate; and thus *every seed* is a cross between the two—the seed, not the berry, being affected the first year. Every seed in every berry of Burr's New Pine, Hovey's Seedling, and other pistillates, are necessarily always crosses. We would recommend the following as suitable varieties to produce seed for this purpose: Burr's New Pine, fertilized with Hooker and Wilson; old Hudson fertilized by Hooker; Hovey's Seedling fertilized with Early Scarlet and Walker's Seedling, &c.

Requisites for Making Good Butter.

What are the requisites for making the best butter? A.

There are a few butter-makers who have established such a reputation for making the very finest article, that all they can spare for market is eagerly taken at several cents a pound above the market price. So far as we know, they all adopt the following rules; or if they do not, they practice them:

1. A perfectly clean cellar, not only clean from all dirt, but from every bad odor—pure, sweet, and fresh.

2. Perfectly clean, well aired vessels. Not an infinitessimal speck of any foreign or sour substance adheres to any of them.

3. Churning before the cream becomes old.

4. Securing such a temperature that it will require about half an hour for churning—if performed much sooner, a loss of butter must occur, and it is not so good.

5. Work all the buttermilk out, which is rarely done—and work no longer, which is still more rarely, but sometimes done.

6. Use the purest salt—and add an ounce to a pound.

7. Pack the butter in the jars or firkins *solid*—put as much in a small space as possible.

8. Lastly, and first also, provide good sweet pasture, and plenty of perfectly pure water for the cows at all times.

If any have practiced all these, and have not succeeded, we should like to hear from them. It is proper to state, however, that there are some who assert that their vessels, &c. are clean, when in fact they are far from it.

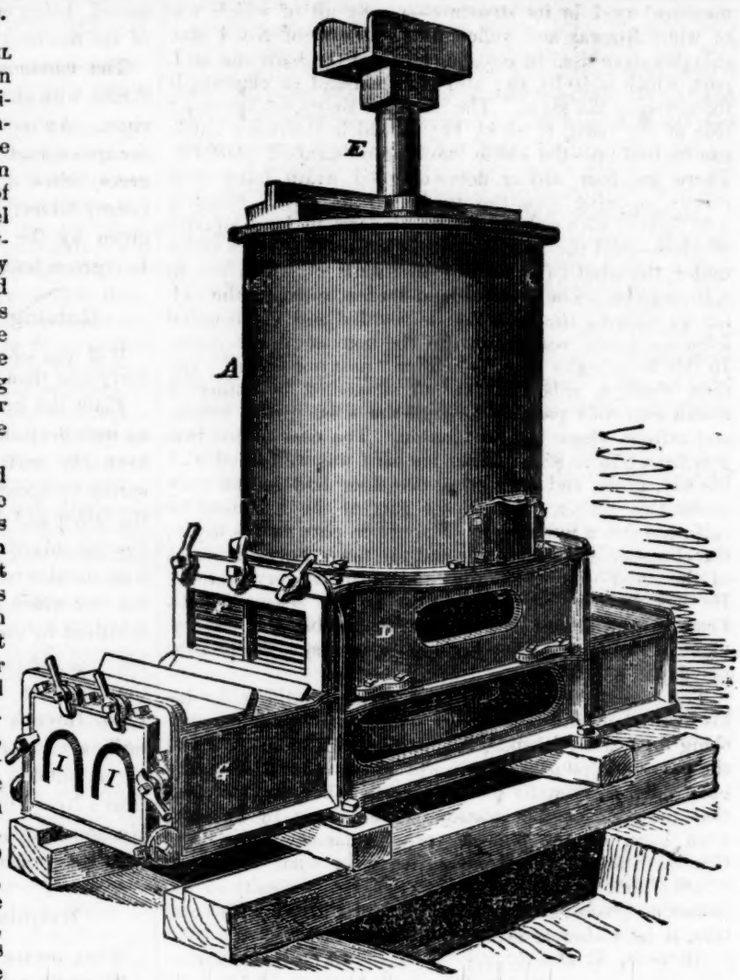
CURE FOR SCRATCHES.

I will send you a receipt to cure the scratches. Take a little white percipite pounded fine, mix with fresh butter or lard, and wash the part affected with suds, and dry it—then apply the ointment once a day. Two or three applications is sufficient. This I think is ahead of all others.

Butternuts. J. H. R.

Smith & Winegar's Tile Machine.

This machine was invented by SAMUEL M. SMITH and CALEB WINEGAR of Union Springs, N. Y. Having had an opportunity of witnessing its working, we can commend it to tile manufacturers as a valuable invention. Its prominent advantage is in performing *at one operation* the work of grinding the clay, screening it from gravel and forming it into tile. It is usually driven by horse power, but water or steam may be employed. The tile thus made we find is better formed generally, than such as is made by hand machines, on account of the stiffer consistency of the clay which may be employed by the more powerful propelling force. The softer material required for manual labor often causes the tile to settle out of shape.



The annexed figure is a well executed representation of this tile machine. The clay, with a sufficient portion of water, is first supplied to the mill A, and when ground by the power applied to the shaft E, it passes down into the box D, and is pressed by a reciprocating plunger through screen, F, and drops into the box, G. It is again pressed by the same moving power through the dies, I I, on the carriages, and ready to be placed on the drying boards. This machine makes all sizes and forms, from one and a half to twelve inches in diameter, and the inventors say it will make twelve hundred 2-inch tile per hour, which statement we have no reason to doubt. For ordinary every-day work, about 600 are made in an hour. It is made of iron, and appears substantial and durable. The working parts being visible and accessible, any coarse gravel or foreign substance is quickly removed from the screen, and the dies readily changed. Further information will be given by A. LATOURETTE, Waterloo, Seneca County, N. Y., who is one of the proprietors.

FILTRATION vs. EVAPORATION.

That evaporation is a slow and tedious process, is a fact of which the farmer who has undrained retentive soils, which he would plant or sow in good season, is often reminded, and the thought can scarcely fail to arise, that some quicker way of getting rid of the surplus water would be both convenient and agreeable. If it can be shown that a certain remedy for this source of delay has been found, and can in most cases readily be put into operation at a slight expense compared with its beneficial results, surely none need longer suffer from this cause. That draining is such a remedy—that its application is profitable to the farmer—that in nearly every instance the expense is repaid by longer seasons and better crops, let us attempt briefly to prove.

Look at a retentive soil in spring-time—a stiff clay or hard-pan subsoil, for instance. The water then abundant on the surface and saturating the upper soil, must pass off either by drainage or evaporation. It cannot sink or filtrate away—the impervious subsoil prevents—it cannot drain off; the surface is too level and too retentive of water—hence it must remain stagnant until the warmth of the sun and passing currents of air effect its evaporation. And evaporation is not only a slow process, but a *cooling* one—the heat passing off with the vapor—and in proportion to the quantity of water thus passing, will be the loss of heat from the soil. On the same soil, when drained, filtration will dispose of a like quantity of water without any change of the temperature, save to increase that of the undersoil—equalizing it with that of the surface soil—in spring always warmer than the subsoil. It will dispose of it in a few hours—in a very short time after the frost leaves the ground in spring, or after a heavy shower. Filtration not provided for, the much longer time—weeks instead of hours—required for evaporation, shortens the season of preparation, or totally destroys the chance of a crop.

Could the water now making mortar of many an undrained clay, find an outlet or passage *through* the soil, the character of that soil would rapidly be changed. Who has not observed how soon heavy clays become friable when placed where the water freely flows from beneath them, or who can fail to see that a like result would follow the deep and thorough draining of even the heaviest soil. And the evils of stagnant water, or water waiting evapotion, can scarcely be overrated. As said above, it shortens the season of preparation for crops, and it also prevents the proper pulverization and culture of the soil; it causes wheat and other winter grains and the grasses, to heave out and winter kill, and fills lowland meadows with wild grasses and weeds, instead of wholesome herbage.

In ease and extended time of working, in the effect of manures applied, in the increase and certainty of productiveness, and in many other things which we might name, the difference between a porous or well drained clayey soil, as compared with an undrained and hence compact and

retentive one, is almost marvelous. And this difference is simply "filtration *vs.* evaporation." In the one, the excess of water has free course through the soil, passing away by the drains without delay; in the other, it must wait the slow process of evaporation—a process leaving the soil more compact than before, and every way less fitted for producing any crop of value.

This difference in the soil "drained, or drowned," as it has been quaintly characterized, is not only observed in early spring, but in the heat and drouth of summer. A heavy soil becomes far dryer and harder from the effect of dry, hot weather than a light one. The porous soil takes up moisture from below, as well as absorbing it readily from the air. Thus a well drained and deeply plowed soil is little injured by drouth—its increased depth of mellow, friable earth gives greater extent to its power of supplying moisture to vegetable growth.

INFLUENCE OF THE MOON.

We published a few weeks since a few remarks on the influence of the moon on the decay of timber, in reply to a communication in the American Farmer. Those remarks have brought a reply from a subscriber in Kentucky. He says, "I have tried it, and I *know* that hickory cut in the new or light of the moon is safe for ever from the worms; and if you cut it in the dark or wane of the moon, you may dress it out in what shape you please, and the worms will eat it up."

Now we are willing to give our correspondent, who says this is his first attempt, all the credit possible for accuracy; but when he says he has "tried it," and found that the timber is "safe *forever*," we hope he will excuse us for involuntarily doubting his veracity. It is true, we have heard of the man who said "cedar posts would *last forever*, for he had frequently tried it," yet we think he must have been an older man.

We have been so often told of results produced by the moon, in quite as confident a manner as that of our correspondent, which results frequently conflicted directly with each other, that we could not possibly believe them all. On examining further, we found that confident opinions had been either founded on isolated cases; or if a number of examples had been taken, all the exceptions, usually about one half the whole number, were singularly overlooked. We never yet failed to cure any person on whom we tried the experiment, by invariably and repeatedly reminding him of the exceptions only. We cannot see how the sun shining on this or that side of the moon can make any difference, and must therefore ask the privilege of doubting a little longer.

We should perhaps have added that our correspondent says that the time for cutting is just the reverse with *white oak*. "You cut an oak tree in the dark of the moon, and the worms will never touch it." What is the reason of this difference between the hickory and oak? What is the rationale? The light of the sun flies ninety-five million miles and strikes the moon; it shines on it equally all the while; a part of the time we see the shade, and a part of the time we do not; but why this faint shadow more than two hundred thousand miles off, has any more to do with the decay and preservation of oak and hickory timber here in Kentucky, than the whisk of a sturgeon's tail in the bay of Biscay has on the boiling of a tea-kettle at Pike's Peak, we are unable at the present moment to perceive.

[For the Country Gentleman and Cultivator.]

MOLE PLOWS.

EDITORS COUNTRY GENTLEMAN—In your issue of March 1, Mr. Lewis C. Smith, of Mo., inquires, "whose is the best mole plow for draining purposes—the team necessary to draw one a foot or more deep through a heavy tenacious clay soil?"

It might with great propriety be considered that I was disposed to be invidious were I to recommend any one of the numerous mole plows patented from a neighboring county (Madison) within the past two years. The names of parties interested in the manufacture and sale of the plows are Witherow & Co., A. Defenbaugh, Moses Bales, Cole & Wall. The address of all of these parties is London, Madison Co., Ohio.

The beam of the plow ranges from 15 to 18 feet in length, the front end, as well as the rear, resting on a truck; the length of the cutter or coulter is from 4½ to 5 feet; the breadth from 6 to 9 inches. The mole is of various shapes and sizes, ranging from 4 by 5 inches to 5 by 8 inches in diameter and making a drain a section of which is a ⌂ to a circle, and an oval, the shortest diameter of which is the breadth of the drain. Experience has determined that the employment of a capstan is the better method of operating these plows. The capstan is fixed on a frame with legs inclined in the direction of the plow, which (when the power is applied) sink 12 to 18 inches into the earth and hold it firmly in its place; the capstan is 15 to 18 inches in diameter, 2 to 3 feet in height, on the top of which a lever from 15 to 18 feet is firmly fixed; at the extreme end one or two yoke of oxen, or a span of horses is attached to operate the plow, from the front end of which a two inch cable passes to the capstan. This cable is usually 100 feet or 6 rods in length. The draft to operate the plow making a drain 5 by 8 inches in diameter at 38 to 40 inches in depth in a stiff clay is from 250 to 325 pounds—as tested by a dynamometer—the draft of an ordinary plow in loamy soil, cutting a furrow slice of 12 inches wide, and 8 inches deep is 500 pounds.

Gentlemen from Fayette and Clinton counties testified a few days since, before the U. S. Circuit Court in Cincinnati, that one thousand rods of drains could be made in one day with a mole plow, at an expense not exceeeing 1½ cents per rod.

Ten or twelve years ago mole plows, made somewhat alter the style of that of Col. Dickinson of N. Y. State, were used; the mole was a cone not exceeding 3 inches in its greatest diameter, but required three to four span of horses to operate; the consequence was that they trampled the ground in operating it so much that it required several extra plowings to bring it into "good heart" again. In Fayette, Clinton, and Highland counties the Marquis & Emmerson mole plow, which does not materially differ from any of the above named ones, is used to a considerable extent. Mole-plow draining has been introduced into Greene, Warren, Clark, Madison, Union, Pickaway and Ross counties. The soil in many portions of these counties is a stiff clay—drains made by the mole plow three or four years ago are said to be as good as when first made.

After all, the great proportion of arable land in Ohio which requires underdraining, cannot be drained by the mole plow, the substratum not being sufficiently tenacious.

I may as well say a word or two about the progress we are making with tile drains. In Lake county there are two tile drain manufactories, at Cleveland four, in Lorain county two, in Champaign Co. one, and in Franklin Co. (Columbus) one, which have sold all the tile they are able to manufacture during the past season. In the Northern portion of the State twelve new establishments were erected during the past summer and autumn, and which will go into active operation next summer—the demand for tile appears to be unlimitted; before five years we will have one, if not more, tile establishments in every county in the State. The style of tile mostly used is the horseshoe and pipe, from 2 to 3 inches in diameter. JNO. H. KLIPPART.

Columbus, O., March 10. Cor. Sec. O. S. B. of Ag.

[For the Country Gentleman and Cultivator.]

SOILING CATTLE.

Messrs. Editors—I feel constrained to say a few words more upon this subject, although others would do it greater justice. Yet "in the multitude of counsellors there is safety." I will therefore mention a few things which, to my mind, give this system the preference over that of pasturing, and hope some one will "enlarge" and "improve" upon it.

1. *The Fences.*—You are aware, Messrs. Editors, that fences are a heavy tax upon the profits of a farm—the material, and the labor of keeping them in repair, under the most favorable circumstances, amounts to quite a sum annually. But in many localities fencing stuff is getting to be quite scarce, is very expensive, and difficult to obtain, even at high prices; and this evil will continue to increase for time to come. Now, by adopting this method of keeping stock, the greater part of this expense may be saved, as but few fences are required; and not only so, but the land now occupied by them, and also, in many cases, by a variety of shrubs and flowering plants—such as elders, willows, Canada thistles, mulleins, and the like—may be made available in raising valuable crops. This would add much to the appearance of the farm, and the land thus gained for tillage would, in many instances, go far towards keeping the stock upon it.

2. *The Saving of Land.*—I think there can be no question about this. In my opinion one acre of *good* clover will afford as much feed as four acres of the average pastures—corn and sorghum about the same; with millet the difference is not quite so great. There may be other crops that could be as advantageously raised, but these are all that I have tried to any extent. If this be so, it is evident that the stock upon the farm may be greatly increased, or there will be quite an additional number of acres for other purposes. Often two crops may be raised from the same ground—as where rye is sown in the fall, and fed off early in the spring, any other crop may follow it. Early corn may be followed by millet or turnips, and later corn by rye for the following spring, and so on.

3. *It is Better for the Stock.*—Cattle are often turned to pasture too early in the spring, before the feed is sufficiently large to give them a good "bite," or sufficiently nutritious to do them much good; the consequence is, if there happens to be a "dry spell" in the spring, as is often the case, they will be very likely to have short feed through the summer. Of course, they will thrive but little, and will scarcely get over a hard winter's keep, before they enter upon another. When pastured, they are subject to all the vicissitudes of the season—the usual drouth in July and August diminishes, often very materially, the quantity of milk, and checks the growth of young stock. But if soiled, the case is different. Where proper provision has been made for them, they have their food regularly, and all they require, and are in a great measure exempt from the changes thus mentioned. The flow of milk is more uniform—the only diminution being the natural one as they advance in the season, and I think the quality of the milk richer. Butter made from cows thus kept, is decidedly of a better quality, and in hot weather has not that oily appearance so often the case with it at that season of the year. I presume this is owing to the fact that the cows have not had a long drive, it may be, to pasture, and been exposed to the hot sun through the day, and so become heated, affecting their milk. Whatever may be the reason, we have had no difficulty in making butter, in the hottest weather, that would work into nice rolls when it has stood a sufficient time after being salted—this I think an important consideration. We use neither ice or cold water in making butter. (Our butter is furnished to families, weekly, in rolls.) Similar advantages attend the keeping of young cattle in this way—they grow faster, and it tends to make them gentle—if heifers, they become docile and quiet milkers with very little trouble.

I will mention a circumstance that will convey the idea I wish to, perhaps better than I have done it. A friend called upon me the latter part of last September, who has a farm of about two hundred acres, and I think milked at the time 16 cows—we had just passed through a "dry spell"—he said his cows did not average over three and a half pounds of butter a week, while we were making, at the same time, nearly six pounds to the cow. The reason was, his cows were *pinched*, and mine had *enough*.

4. *A Much Larger Quantity of Manure is Made.*—This is the last thing I shall mention, and though last, it is not the least in importance. The manure heap is the farmer's "bank," where he can make his "deposits," and present his "drafts"—his "deposits" must be equal to or exceed his "drafts," else he will be out of "funds." If then the stock may be considerably increased by soiling, he has the means of enlarging his "pile," and thus preventing his "drafts" from "protest."

It should be the aim of every farmer, to make, save, and apply to his land, every thing within his reach that will enrich it—this it seems to me, is one of the great secrets of successful farming; and I am of the opinion, that after one has tried this method of keeping his stock, he will be astonished at the amount of manure made annually, and for this and other reasons, will be quite unwilling to abandon the system.

But as a good deal is said upon the subject of making and applying manure, in the agricultural papers—urging farmers to look to their own interests—it is needless for me to say any thing more in regard to this matter. Every one knows that to raise large crops, his land must be made capable of producing them, and I have no doubt that the soiling of cattle will contribute largely towards producing this result. J. L. R. *Jefferson Co., N. Y.*

[For the Country Gentleman and Cultivator.]

"FARM IMPROVEMENT."

Editors of the Country Gentleman—On the first page of your paper of Feb. 9, is an article with the above heading, and having some experience in that line, I have concluded to give your readers some of my ideas and some of my experience also. In the first place, I came into possession April 1st, 1853, by purchase, of the old homestead of the Yardley family, which had been in the family since March 21, 1681, with the exception of about four months, viz., from March till June, 1710. The original grant (in my possession,) from Wm. Penn to Wm. Yardley, dated March 21st, 1681, is for "500 acres of land, to be located in the Province of Pennsylvania,"—197 acres of which remained in the family at the time of my purchase. I first purchased 135 acres with the buildings, and some months afterwards purchased 35 acres more, and I then sold ten off, leaving 160 acres, the present size of the farm.

The property had been rented about twenty-three years, and was somewhat out of order at the time of my purchase. On looking about me to see what was necessary to put the farm in the best shape possible, I came to the conclusion that the whole thing needed remodelling. I immediately commenced taking down the inside fences, and laid out the fields anew, so as to equalize the size thereof, and also to bring as many of them as possible to the stream of water, which runs from west to east, through nearly the middle of the farm. I also laid out a new farm road, which began at my wharf on the Delaware Division of Pennsylvania canal, (the canal being the eastern boundary of the farm,) and passes by the barn and by all the fields to west end of the farm, where said road crosses the creek. I have built a large bridge of stone side walls, and covered the aperture for the water with stone, and then continue the side walls on upwards, and the space between I fill with stone which I pick from the fields. The bridge is passable thought not finished, and never will be until raised up to a level with banks on both sides of the creek, and as long as any offal stone remain on the farm and the bridge is unfinished, there is a place to dump them.

In laying out the fields, I first began by setting the two fences which enclose my lawn, so as to enclose also all the farm buildings, thereby enclosing the whole in a plot of about two acres, with the outside fences parallel. I then

laid out the fields parallel to the western and northern lines of the farm, and in size about twelve acres, and so arranged that five twelve-acre fields of farm land and ten acres of meadow have running water in them, and a strip of meadow along the creek of about six acres, which is only fitted for grazing purposes. I disagree entirely with Mr. J. J. Thomas in his 7th proposition. I deny that hills should govern the size or shape of fields, or that they should be always plowed down-hill, for by so doing you would soon have the soil plowed down the hill, which if left to the action of the rains, will get off much sooner than I want it to.

In your editorial remarks on the size of fields, you say, "We would propose then, that the *amount of manure* which the farm can furnish, determine the size of the field." I would propose no such thing, but would lay out my fields to suit the farm and system of farming to be adopted, and then work up the manure heap *in some way* to correspond therewith.

And now, Messrs. Editors, having got my stakes set for the new fences, I commenced overhauling and assorting my rails. I first selected all the large rails suitable for a four-rail fence, and put them on a bank along a public road. I then took all the straight and small ones and put them along the farm road. I then took the same size but of a rougher quality, and put them on the line between me and my neighbors; and lastly, I took all the most crooked ones and put into the division fences. All my line and most of my division fences are five rails high, and nearly all of best chestnut timber, and put together by an experienced fence-maker, who I consider an adept at the trade.

And now, having got my farm fenced, I will give you some idea of the natural lay and quality of the land, and my plan of farming it. To begin, I would say that the soil is a brown sandy loam, well adapted to all kinds of grain and grass, the stone in it being brown sandstone, with an open gravelly underlay, considerably rolling, and therefore needing little underdraining.

The fields have formerly been plowed in lands of different sizes, and both ways, thereby creating artificial inequalities in the soil, and the water driven into bodies so as to wash many of the fields badly into gullies of more or less extent. I immediately commened a different system of plowing, for I felt satisfied that unless some other system was adopted, my farm, with all the manure I might put upon it, would wash off on to somebody else, or into the Delaware.

I first commenced the smoothing system, by plowing the old lands to their proper level, and then if the ground was not in proper shape, I used the shovel and cart and hauled the hills into the hollows, and have thus moved nearly four thousand ox cart-loads of dirt in seven years. In moving dirt I sometimes use a board about eight feet long and six inches wide, set edgewise under the hind part of a triangular harrow, and then with an engineer to manage the horse and two men to manage the harrow, a field of ten or fifteen acres may be smoothed down in double quick time.

Having got my field smooth, I endeavor to keep it so. Sometimes in plowing for corn, I begin at the fence and plow around the field outward until finished, and then haul the outside furrow and fill the corners and middle "clear up." Last spring I sowed my oats on the corn stubble without plowing the ground at all, (having first cut away the cornstalks with a hoe when the ground was hard frozen.) I first sowed the oats and then harrowed the ground three times, and rolled it down, and had plump fifty bushels of oats to the acre, the uniervsal prediction of the knowing ones "to the contrary notwithstanding."

In preparing my field for wheat, I first put on the manure, and plow the field into large lands, say thirty or forty paces wide, and then plow them back again for seeding. I always endeavor to destroy all signs of vegetation inside of my fences before putting in my wheat, and my method of doing it is to plow the oat stubble from the fence on all sides, and by putting a single horse to a plow, I can plow within six inches of the posts. I then take a sharp spade and go on the other side of the fence and turn the back to the rail, and cut all loose under the fence, and let a man follow with a potato rake and pull the dirt and trash into the oatfield side, where the harrow will effectually exterminate it. This method effectually destroys the mole and mice harbors, and does away with the old system of raising a fringe of noxious trash around the fences, to be sown broadcast over the field by every blast that blows. Lastly, in preparing the field for wheat, I plow and scrape the dirt all down to an even surface, that is, an equal depth of soil all over the subsoil, and fill up all the pie-dishes that may be in the field—then harrow the field well, and pick all the stone off, and then roll it down by running the roller as close to the fences as possible —drill in my wheat and timothy seed, (some time from the 1st to the 15th of Sept.,) and follow the drill with a light one-horse harrow; then pick the stone again; and then roll down the field in the most complete manner, drive out the team, and put up the bars or shut the gate.

And here, Messrs. Editors, I might also observe that I sow nothing but the best of seed, and never let a noxious weed go to seed if I can possibly help it. In conclusion I will only say, "He that knows better how to 'tame a farm,' why let him teach—'twere charity to show."

Prospect Farm, Bucks Co., Pa. JNO. KELSEY.

P. S.—I find on looking over the above article, I have forgotten to say anything of the amount of stone I have removed and the manner of doing it. In plowing any other than a sod, I place a grubbing-hoe axe downward in the coulter-hole in the plow beam, and then say to the plowman, take out every stone of sufficient size to disturb the plow, and if he finds any too large, I have him mark the place, and take them out afterward. By this method I cleaned nearly all the farm of stone—in all some 300 or 400 perches, nearly all of which are first-rate building stone, and many of them so large as to require blasting before they could be removed—in addition to all of which, I grubbed innumerable loads of briers and elders from along the fences.

In a communication I wrote you some days ago, I believe I omitted the finishing stroke on my wheat field. It is this: After the last harrowing, or perhaps during its progress, I pass round the field with a garden rake, and push the dirt back under the fence, and smooth it down nicely, so as to give the scythe a fair chance; and then after drilling my wheat, I take a pan of timothy seed, and go round the field, and sow the ground along and under the fence; then follow with the rake, and rake the seed in, and break up the clods that the roller cannot reach. The next spring I sow clover seed around the fence in the same way. Thus you will perceive that when I come to mow the field, I have hay about the right stripe.

Bucks Co., Pa. JNO. KELSEY.

PROFITS OF FRUIT.

The New-England Farmer states that the Northern Spy apple now sells for fifty to seventy-five cents a dozen at retail in the Boston market. This remark of course applies to those only of fine quality and well kept. Fruit that is better than the average will always bring not only a high price, but will also command a ready sale. The Northern Spy is one of those fruits that will always show the effect of good treatment, and those are the sorts that afford the highest profits under skillful hands. It has been objected to this apple that it is hard to convey to market, on account of its liability to bruise. This is the very quality that gives it its high value in selling. A half a day's labor in extra pains in packing, will repay the cost of a week's labor in putting up. It is the difference in the results of common and skillful management, in raising, gathering, ripening and packing that gives such great prices to the finest pears. Farmers! if you wish to make money by marketing fruit, pursue such a course as will enable you to exhibit specimens, finer in quality and more splendid in appearance than those around you, and you can command almost whatever you choose.

SEEDING DOWN WITH OATS.

EDS. CO. GENT —The first numbers of the Co. Gent. are at hand, and to say I am *pleased* with their contents would be a small word wherewith to express my satisfaction. As I look over the nicely printed pages—the observations and experience of practical and thorough farmers—all brimful of instruction, my only regret is, that I had not long ere this been a subscriber to its valuable pages.

Allow me to couple the above with an inquiry. I have seeded down, after oats, for two seasons in succession, an eight acre lot, the first season with clover, the second with clover and timothy, and each time it has proved a failure. The soil is well drained, and consists, for the most part, of a black mold with a gravelly clay subsoil. The oats have been good each season, yet marks of seeding could be seen only in spots. The grasshoppers have been pretty thick at harvest time in the field, but still it was not attributed to them, as I inferred that they would have left *no spot* untouched. The lot has not been seeded down for a number of years—been under the plow each season. If you, or some of your numerous correspondents, will suggest some remedy for this case you will confer a favor. AGRICOLA.

Genoa, N. Y., 1860.

Seeding down with oats is rarely successful. If the oats are poor the grass may succeed—but on good soil, that will bring heavy oats, and which should grow good grass, it usually fails. There are two modes which our correspondent may adopt. The first is to sow the grass seed (double the usual quantity) early in the spring, on the land which he has prepared for the oats, with no other crop, and brush it in. If sown quite early, it will be good pasture before midsummer. We have cut about two tons to the acre under favorable circumstances, the same year. The second year the grass crop will be all he could wish. The second mode is to sow oats alone, and after harvest to plow the stubble, and sow and brush in the grass seed. The grass crop next year thus treated will be much better than it could be if the seed was sown with oats in spring.

[For the Cultivator and Country Gentleman.]

CORN FOR A POUND OF PORK.

MESSRS. EDITORS—How much corn does it require to make a pound of pork? With a wish to obtain a correct answer to the above question, I made an experiment in the fall of 1857, and now give you the result.

On the 28th of October, I weighed a pig which was about six months old—the weight was 145 lbs. I then fed it ten days and weighed again, Nov. 7th—the weight was 175 lbs.—gain, 30 lbs., and it had eaten 96 lbs. of corn. I then fed corn-meal fourteen days, and weighed again Nov. 21st—the weight was 211 lbs.—gain, 36 lbs., and it had eaten 145 lbs. of meal. I then fed on corn seventeen days, and again weighed Dec. 9th—the weight was 263 lbs.—gain, 52 lbs., and it had eaten 216 lbs. of corn. I then fed till Feb. 1st, 1858, fifty-four days, and weighed again—the weight was 311 lbs.—gain, 48 lbs., and it had eaten 445 lbs. of corn. It was butchered that day, and weighed dressed, 262 lbs.

I was disappointed in the result all the way through; the gain on the first feeding of corn, was far beyond my expectation; then the gain on meal was *less* than I expected, as I had often heard it said that pigs would gain faster on meal than they would on corn. Then again, the gain on corn after the meal, was more than I expected; but the gain on the last trial was very much below my expectation, and unaccountable by me.

So far as the experiment extended, I do not know how it could be conducted with more accuracy. The drink was water, in a trough separate from the feeding trough, so that the food was taken dry.

I would add, that in 1858, Sept. 24th, I weighed a pig, to see how much he could be made to gain in twelve days, (previous to a fair which was to be held.) His weight was 104 lbs. At the expiration of the time he weighed 145 lbs.—gain, 41 lbs., or nearly 3½ lbs. per day. He ate 70 lbs. of corn, and 16 lbs. of rye bran mixed with skimmed milk. In both cases the pigs were fed as much as they would eat, a few days before weighing, so that there should be no "filling up," as it is called, to take into the account.

From these experiments, in connection with Mr. Proctor's statement in the Feb. No. of the Cultivator, page 65, and with some observations that I have made at other times, I am of the opinion that it is much easier making pork in the summer and fall months than it is in the winter months. MARCUS E. MERWIN. *Litchfield Co., Conn.*

[For the Country Gentleman and Cultivator.]

HOW TO CLEAN SEED WHEAT.

MESSRS. EDITORS—The following mode of cleaning chess and smut from seed wheat, I have found to effectually prevent transmutation, and the benefit to the crop will pay the expense.

Take a barrel and fill it half to two-thirds full of brine, strong enough to float a potato—pour into it one bushel of wheat—skim off all that floats—stir and turn up the wheat—skim and stir it again and again, as long as any thing rises. After skimming all you can get from the brine carefully off, (so as not to agitate the wheat,) in a tub, there will be some chess missed by the skimmer—be careful to make it all run off with the brine. When the wheat begins to come, place your hands or some screen before it, that will hold it back, and allow the brine to drain off. When drained, empty the wheat on the floor, and mix in it lime enough to dry it, so that it will not stick together. Pour the brine in the barrel again, put in another bushel of wheat, and proceed as before.

By this method all the chess can be got out, and if there is none in the ground, the operation will not require to be repeated the next year.

There is usually some chess in Timothy seed. If it is sown with the wheat, sift it through a meal sieve.

Chess will grow with grass from year to year. I have seen it in the grass that was mowed three or four years in succession, and it increased every year. G.

Poughkeepsie, N. Y.

[For the Country Gentleman and Cultivator.]

CULTURE OF THE RUTA BAGA.

MESSRS. TUCKER & SON—As this is a good time to make calculations and lay plans for summer, I propose through your excellent paper, to inform my brother farmers how I raised ruta bagas quite successfully last season. A piece of pasture ground, which was so badly run out that it produced next to nothing, was taken for bagas. It was plowed about ten inches deep, harrowed well, and furrowed out with a light one-horse plow. Compost manure composed of night soil one part and surface soil four parts, well mixed, was dropped in hills in the furrows two feet apart, at the rate of one shovel full for three hills. It was covered lightly with earth by the hoe, and seed dropped by hand and covered by hand hoe. The rows were three feet apart, and it was designed to have two plants grow in a hill, but in planting we covered some of the seed too deep, and it did not come up; but what grew were very large and fine, and had the ground been fully stocked the yield must have been very great.

The advantage gained by this plan is that it costs but little labor to tend them, (which always comes in a very busy time of the year,) and requires but little manure. We cultivated twice with a horse and hoed twice by hand. But, says some of the brotherhood, ruta bagas are an exhausting crop; little or nothing will grow after bagas. Such is not my experience. If the crop is fed, and the manure returned to the land, apply what crop you please, and you will find your labor rewarded by a bountiful crop. But if one prefers he may grow bagas for a number of years in succession on the same piece of ground. I hardly know how one can get so much feed in any other way. By feeding the crop and saving all of the manure, you will keep up the fertility of the soil without requiring the proceeds of any other crop, and most likely have a sur-

plus of manure left. A neighbor of mine, and he quite a successful farmer, has had them on the same piece of ground for the past four years, and the crop of 1859 was much the best, though it has produced an excellent crop each year, although but lightly manured. Last year he manured better, applying 25 or 30 two-horse loads to the acre, of good stable manure. The same ground was set to apple trees four years ago, and they are doing nicely. He intends to continue the crop on the same land so long as it continues to improve. M. S. K.

Chicopee Falls, Mass.

[For the Country Gentleman and Cultivator.]

A Sure Remedy for Lice on Animals.

It is really amusing, but not very instructive, to read the ideas of different men with regard to the manner of treating lice. One will recommend one nostrum, and another something else equally inefficient.

Why do lice flourish best, and increase much more rapidly, on very poor, emaciated animals, than they will on fat animals? Because the surface of the skin and the hair of fat animals is somewhat oily, while the skin and hair of very poor animals is quite free from oil. Well, what of that? Why nothing, only no lice can ever propagate their species among oily hair; and whether they have any brains or not, they will never deposit their nits among oily hair. If the nits after they have been deposited, or stuck to the hair, should be oiled, they will never hatch; and the lice seem to know that fact, and therefore they do not find a congenial locality in the hair of an animal which perspires very much. Consequently if lice are formed on a *fat* animal, they will always be more numerous near the end of his tail than on any part of his body. Lice are very like sheep in one respect, they like a warm and dry place.

Let a few nits be placed in a warm place for a few days, and they will hatch; but let them be *oiled*, and it will be impossible to hatch them. So with the eggs of birds and domestic fowls; give them a good coat of paint or grease, and they will never hatch.

The bees, which are such a great annoyance to horses in the summer, which fasten their eggs to the hair of horses, seem to understand this principle much better than most people do, and therefore they deposit most of their eggs on the hair, which will be least liable to be moistened with sweat. For this reason we always see many more *bot eggs* on the legs, below the knees of horses, than on any other part of them. If such eggs should be *greased*, or moistened with sweat a few times, they will never hatch.

There are several very good remedies for lice on animals; but among them all, perhaps, *oil* is the most efficacious and harmless. None but sweet oil, or the best kind of lamp oil, or winter strained machine oil, should be used for such a purpose. If linseed oil, or some other kinds of oil be used, it is liable to *dry*, and the hair of the animals will all stick together in dry, hard bunches. Pour it on their backs, and on their necks and tails, and rub it in thoroughly; and if lice take up their quarters on the dewlap, give *it* a good oiling, and they will soon bid adieu to such oleaginous climes. Oil should be applied when the weather is *warm*, rather than when it is very cold; because in very cold weather lice keep very quiet, and do not deposit many eggs. Let it be kept in mind that they never deposit their eggs on oily hair.

In the spring of 1859, we were raising a lot of turkeys which were about as large as quails, when they began to droop, and appeared very lifeless. Upon examination they were all found to be as lousy as an Egyptian. Every one of them was caught, and sweet oil was rubbed on their heads and *poured* on them, under the wings—giving them a good sopping—and in three days not a louse could be found, and the turkeys soon began to flap their wings and move about with agility.

Mercurial ointment or "*unguentum*," which is made of mercury mingled with lard, is often recommended for lice. But it is a very dangerous remedy; and is no more efficacious than oil. I applied mercurial ointment once to my calves, which were lousy; and it made them so sick, that I feared, for some time, I should lose them. Such a remedy never should be used, when there are enough besides, of a milder character.

A decoction of tobacco is frequently recommended for destroying lice. But oil is much cheaper and more efficacious, and will not make animals sick; but tobacco, when applied very bountifully, will often make them sick.

Fowls roll in the sand in order to mingle it with their feathers, which will *scratch* the lice to death; and cattle frequently throw dirt on their backs, which destroys the lice *mechanically*, just as scores of people are smashed up among the rubbish of a huge building when it falls. But it is very difficult to make sand or ashes remain among the hair on the dewlaps of animals, or on their sides; therefore *oil* seems to be preferable to almost any other remedy.

Fat catttle will *sometimes* be covered with lice. I once owned a yoke of very fat oxen, which were the lousiest beings that I ever heard of; but a good sopping of oil soon dispersed them. Keeping animals in a thriving condition is usually a good preventive; but it will fail sometimes as a remedy. S. Edwards Todd. *Lake Ridge, N. Y.*

[For the Country Gentleman and Cultivator.]

HAY CAPS.

Messrs. Editors—This is a very useful article in haymaking, although a little out of season just now—but it is the right time to make or procure them, that they may be in readiness when wanted. The use of hay caps has not as yet become general, but the time is not far distant when every progressive farmer will have them, and consider them about as necessary as any farm implement.

Three years ago I made one hundred caps, one and a half yards square, of heavy cotton cloth. They were made by sewing half a breadth to a whole one of the desired length. To fasten them on, I first tied stones in the corners, but they would blow off, and were ugly things to handle—then I sewed strong twine to the corners, with pegs attached, but in high winds the corners would pull or tear out after a while. Finally I tied a knot in the corners, leaving the end sticking out about an inch, so as not to slip or untie, and fastened the cord by tying it back of the knot, and found this to work well. The strain then comes upon the whole corner, and not upon a small section, as when sewed on. There is a little knack in putting caps on so that they will "stay put." The pegs should not be run *straight* into the cock, but *pointing up* at an angle of about forty-five degrees; then the working of the cap by the wind will not draw them out; and the cap should be drawn down snug when the last two pegs are put in. If thus put on, not one in a hundred will get loose, and the cock cannot blow over.

But my hay caps called forth various and often ludicrous remarks, when first brought into the field—many looked askance at them, and thought it useless to "blanket" hay, besides any "gump" might now that water would run through cotton cloth. One individual who first saw them at a distance, and really did not know what they were, (they were all in use in one field,) concluded it was the encampment of a general muster, or of an invading army—didn't know which. However, I was so well pleased with them, that I added fifty to the number the next season, and also made two twelve feet square, to cover stacks and think the money well invested. J. L. R.

COUNTRY RESIDENCE AND VALUABLE FARM FOR SALE,

Known as the "COLDEN MANSION FARM," situated in Coldenham, Orange Co., N. Y., 7 miles west of Newburgh, on the Newburgh and Cochecton Turnpike.

The House is 50 feet square, two stories high, basement kitchen, and built of stone. There is a large Farm House and Tenant House also on the place, together with Carriage Houses, Barn, Hay Houses, Granary, &c., &c. A fine Apple Orchard—also a great variety of the choicest kinds of Fruit Trees in full bearing.

The Farm contains 217 acres, mostly under a high state of cultivation, and is as healthy a location as can be found.

At least one-half of the purchase money may remain on bond and mortgage for a term of years.

For further particulars apply to Judge John J. Monell, Newburgh, L. Murray Ferris, jr., 62 South street, New-York, or to the subscriber on the premises. LINDLEY M. FERRIS.

Mar 8—w6tm2t

[For the Country Gentleman and Cultivator.]

MILLET FOR FEED.

Eds. Co. Gent.—Last winter I wrote you, giving a brief statement with my first trial in raising a crop of the German millet. I was so well pleased with it, that last spring I fitted the ground, and sowed fifteen acres. The ground was plowed about the middle of June, well harrowed, and sowed a little over a half bushel of seed to the acre—again harrowed and rolled, finishing the work June 22d. On the 20th Aug., making sixty days after sowing, I mowed it with a machine; being very thick on the ground, it required two days to cure. Then raked with a horse-rake and cocked. The ground was very uneven. The highest and dryest produced the heaviest growth. On about two acres of the lowest ground, but little grew, being too wet. Some of the heads grew over seven inches in length, and yielded over a tablespoonful of seed. The entire crop on the fifteen acres was sixty loads, as heavy as a span of horses could well draw. I estimate the crop at sixty tons, or four tons average per acre.

I have fed 20 horses (old and young,) and 20 cows, thus far with no other feed, and have enough on hand to last until the 10th of March.

I have a large barn floor on which I put enough to last two days. Put on the horses, and about two-thirds thrash it. It is all fed in stalls and mangers. My horses and cattle eat it readily, and are in better flesh than they ever were at this time of year. Several times I have put a lock of millet and a lock of the best tame hay into the horse manger. The horse would invariably eat the millet first.

A team that works every day, requires about half the grain if fed on millet it would if fed with hay. I have a stack of it in my calf-yard, allowing the calves free access. If you were to see them cut their pranks when let out to water, you would think they had "pretty good keeping" at least. I will here remark, that I wintered fourteen calves last year, fed wholly on millet, and never had a lot in better condition in the spring. The butchers tried to buy them for their market stalls.

One of my neighbors last spring tried to raise two crops in a season by sowing the first in April, and again after the crop came off. He failed in both. The 20th June is about the best time to sow the seed. It is often the case that some of the farmer's crops fail, either by poor seed, heavy rains, drouth, or frosts. If in such cases a little millet seed was on hand, he could in a great measure repair the loss. If the farmers in Central or Western New-York, or any where else where the frosts of June last cut off their corn, beans, potatoes, &c., had sown the desolate ground with millet, they would now have something good and cheap to feed their stock with.

Why the name of *Hungarian grass* should be given to a variety of the millet, is to my mind a query. If a Hungarian emigrant introduced into Iowa a millet seed producing a round head, requiring to be sown each and every year to produce a crop, how can it be called a grass? It does not stool or sprout out after harvest, and produce an abundance of fall feed as some have stated. At least I have seen no after growth as yet. There is no such thing as grass about it. It is Millet, nothing more nor nothing less. It is wrong to class it in your market tables as Hungarian grass seed, or Honey blade, or any thing else than Millet. There is a little difference in the shape of the head. So there is of wheat or barley. C. G. T.

Rock Island Co., Ill., Feb., 1860.

Fatal Disease among Cattle in Massachusetts.

A very destructive disease is raging among the cattle of North Brookfield, and neighboring towns in Massachusetts. None of the animals attacked with it have recovered. The disease first appeared last summer, in a calf of foreign breed, leading some to suppose it is an importation of the pleuro-pneumonia of Holland. The first animal upon which the disease appeared being one brought from Holland to the farm of Mr. Chenery, of Belmont, where cattle are also dying in great numbers—but the sale of the calf, and its transfer to Brookfield, was the occasion of the appearance of the disease in its most virulent form, at the latter place, and with, at present, greater destruction. No less than fifty head of valuable cattle have died, and many more are beyond recovery. Inquiries are being made by the farmers of all who can be expected to suggest any relief. Dr. Dadd addressed some of the citizens of North Brookfield a few evenings since, after examination of the diseased animals, one or two of which had been killed for the purpose, in different stages of the progress of the disease—the offensiveness of it in those which had died naturally, being overpowering. He thought it infectious, but not contagious—believed it to be pleuro-pulmonia—differing from the pleuro-pneumonia of Holland, in its not assuming a typhoid form in our climate. In some cases examined, the lungs were putrid, having mortified. In one instance the lungs were compressed to one-fourth their natural size; in another filled with nearly a pailful of foreign substance in the form of colored serum. The only symptom was a deep seated cough. No remedy could be devised but to isolate the diseased animals and have them killed—this could be done by direction of the Board of Agriculture—the State paying for the loss, as was uniformly done in Europe in similar cases.

Immense numbers—amounting to millions—of cattle have been lost by this disease in Europe. The governments of France and Holland have offered large rewards for a remedy, but none has yet been discovered. Inoculation has been found a preventive, and in localities where sixty per cent of the cattle used to die of this disease only one per cent die since vaccination has been tried. The process is described as follows:—

"This inoculation is done near the end of the tail. The hair is clipped off, the skin cleaned, and two incisions made with a lancet, into which the virus is introduced. The virus must be obtained from the lungs of a cow suffering with the disease, and killed for the purpose, and not from an animal that has died in the natural way from the effects of the disease. The manner of obtaining it is to cut off a portion of the lung between the healthy and the infected parts—the part marbled like water and blood is wrung out into a vessel and allowed to stand one day, when the the bloody part will sink to the bottom, and a lemon colored liquid will remain upon the surface This, *if free from scent*, is fit for use, and may be preserved in a vial. In cold weather it will keep eight or ten days before becoming too corrupt for use, while in warm weather it will hold good only one or two days. The drops introduced into each incision will produce, in a week or fortnight, and in some cases a longer time, a pock quite similar to that caused by the inoculation of persons with the cow pox. When no pock appears it is presumed that the animal is not susceptible to the disease. When the tail of the animal becomes much swollen, an incision is made, in order that the infectious matter may run out, and the wound is from time to time cleansed with water."

☞ Since the above was in type, and too late for this week, we have received an interesting letter from a Massachusetts correspondent on this subject, which will appear in our next.

Large Pumpkin.—I send you a few pumpkin seeds. The original one was sent me last winter. The result from the vine, one pumpkin, which measured 3 ft. in length, 4 ft. around it, and weighed 80 lbs. The skin was perfectly smooth—color a delicate yellow with a few white streaks. I kept it until Christmas. It proved to be the finest for pies we had ever tried; I do not know the name. I would like to hear, through your paper, the result of these seed, and name of pumpkin. G. R. Duer.

Burlington Co., N. J.

Inquiries and Answers.

Draining wet Woodland.—What will be the effect of draining upon a native growth of maple, ash and hickory, growing upon a heavy wet soil, sloping to the west, with hard-pan from two to three feet below the surface—the draining to be sufficient to convert the adjacent land on the lower side of the grove, to gardening purposes? A Subscriber. [The *old* trees will probably be injured by the operation—the younger not. We have seen swamp forests, consisting chiefly of black ash, mostly killed by draining the swamp. The injury would be less with common upland trees growing merely in wet spots—possibly no injury in the present case might be the result, as the change would be much less severe than in draining flooded swamps.]

Grapevines from Eyes.—Please inform me if I can start *grapevines* from the eyes, in a small box of one pane of glass, placed over a hot-bed or in the open ground. P. M. [They need some bottom heat, and will start in a hot-bed.]

Plans of Farm, Barns, and Outbuildings.—[Thomas Bell, Elizabeth, Ill.] Plans of farms will be found, with several illustrations, in the Register for 1857 and for 1859. Designs for barns have been published in the Register for 1856, and for outbuildings in that for 1858, and for good farm houses in 1857, and in other numbers. If water is difficult to obtain, large rain water cisterns will furnish water to stock, if collected from all the barn roofs, and kept in reservoirs of sufficient capacity, or enough to hold at least 25 or 30 barrels of water for every ten feet square of roof.]

Poultry Yard.—How large will a poultry yard need be for 50 hens, and how made to have it cheap and durable? W. P. [We have never had an opportunity of testing the proper size, as we allow our fowls the range of the barnyard, orchard, &c. A fourth of an acre would probably be the smallest admissible dimensions—half an acre would be better. A high picket fence is commonly used. Some breeds, as the large eastern sorts, need very little fence, as they cannot fly much. Our white shanghais will not pass over a picket fence four feet high.]

Peas and Buckwheat for Cows.—Will it pay to mix peas at $1 50 per bushel, with oats at 44 cents, and buckwheat at 50 cents to feed cows? W. P. [It must depend on the prices obtained for their products. Peas are more than double the value of the buckwheat for feeding weight for weight, and about one and a half times greater than oats. The latter would probably be rather the cheapest food of the three, at the above named prices—although the experiments which have been made differ considerably in results. They would be about equal to hay at $12 or $15 a ton. Different animals, different modes of feeding, and difference in the quality of these substances, prevent accurate estimates.]

Corn after Peas.—Will corn do well after Peas? A. B. [Yes; especially if a good coating of manure is given to the land before planting.]

Plowing in Clover.—Which is the best time to plow in clover—when it is in full bloom, or when nearly ripe? Will it do to plow it in in summer, and sow it with wheat the next spring? C. D. [About or soon after it is in bloom. It will do for spring wheat if the clover has been turned deeply under with a flat sod, and the inverted sod subsequently made mellow by shallow plowing afterwards.]

Specific Gravity of Milk.—What is the standard weight of milk, if any, and is rich milk heavier or lighter than poor? B. F. B. *New-Jersey.* [Milk is heavier than water; if the specific gravity of water be taken as a thousand, milk will be on an average about 1031. It varies greatly in different cows, and even at different times from the same cow. A feeding of salt, says Flint, has made the milk of a cow vary from one to three per cent. Cream is lighter than skim-milk, and very rich milk therefore lighter than poor. Rich milk and water therefore resemble each other in weight—hence adulterations by water cannot be detected by the hydrometer.]

Cellar Bottoms.—In No. 8, J. C. R. queries about cellar bottoms. I suppose hydraulic cement would be good, but I have always found common mortar, not made very rich, *good enough*, just on the bare ground—say three or four inches thick, and carefully pounded down until it becomes dry. The process is so simple and cheap that no one who can procure a few bushels of lime and sand, should permit either rats or mice to frequent their cellar. Don't think of employing a mechanic, but straightway mix up a bed of mortar—clear everything off the floor, and if not level, level it—spread the mortar, provide a block about one foot square and six inches deep—insert a handle, and as soon as you see a crack pound down, and as long as it cracks continue to pound. The process is not lengthy, but requires attention while drying.

J. Cope.

Buggy Peas—Query.—Last fall my father and mother were shelling peas. My mother's attention was called away, and she got up, unthinkingly, throwing about a quart of the peas in a tub of cold water. On that account they were put away separately. At the present time the ones that got in the cold water are perfectly free from bugs, while hardly one of the others escaped. Will cold water have that effect?

Rhode Island. Jos. M. Wade.

Cattle Nibbling their Mangers.—I would like to inquire through the Cultivator the cause of cattle nibbling the manger and other boards within their reach, while tied in the stable. Is it a disease, or is it a lack of something in the soil, thereby rendering the hay deficient of something that is necessary to the health of the animal? My impression is the latter, as the land has been rented a good deal and pretty well reduced. If you or any of your readers can answer this and prescribe a remedy, you would much oblige

A Subscriber.

Quick Manures.—A correspondent at Bridgport, Montgomery Co., Pa., wishes to know the best and cheapest manure for a final crop of corn on a piece of land devoted to building purposes in future—the manure being of no value after the present year. In answer, we would say that if guano and superphosphate have already proved valuable for that region, they may be employed, provided common manure is scarce or high-priced. But as the soil is sandy, a large portion of barn-yard manure if applied, would be available the first year, especially if very finely pulverized and mixed with the soil down a few inches. The land being sod, turn it over in spring about six inches deep, mellow three inches of the top surface with a Shares' harrow, which will at the same time turn under partially a moderate coating of fine manure. Manure in the hill also; cultivate with a horse at least once in two weeks till the corn is too large, and we would rather trust the common manure, if not too costly, than anything else. If a Shares' harrow cannot be had, plow as flat as possible, lay the sod flat, roll, harrow, and turn under the manure with a gang-plow—which after all, may be the best way.

Soft Soap for the Borer.—Dr. Fitch stated in his lecture at New-Haven, that soft soap is an unfailing remedy for the apple borer. Is the soap diluted and applied as a wash to the trunk, or applied round the root in an unmixed state? A Young Farmer. *Morristown, N. J.* [The soap will not kill the borer after he has entered the wood—but will exclude the eggs. It should be just thin enough to form a good coat over the bark—some soft soap is already diluted enough for this purpose, while other needs the addition of more or less water. Scrape the earth away somewhat from the foot of the trunk, and coat the bark, as high as the borer is ever found. The rains will wash it down sufficiently to cover all the exposed bark, if any is not supplied. The insect does not like to lay her eggs in the soap. It should be applied early in summer, and be repeated once more in a few weeks, according to the amount of rain which may have washed it off.]

Cottage Roofs.—Can you tell me how long the rafters of a house should be, in order to have hanging eaves, and a good pitch to the roof, the post or studding being 12 feet. Is this too high posted for a country cottage, where good chambers are desirable? The site is quite romantic, and I wish to know if the roof, to harmonize well, should be flat or steep? How high should the lower rooms be finished? An answer to these queries will greatly oblige A Reader. [A flat roof has some serious disadvantages—a prominent one is its liability to both leakage and rot, if covered with shingles. The snow is less apt to slide or blow off, and there is less garret room. As our correspondent has not given the dimensions of his intended house, we cannot give the measurements he desires, as much depends on the relative breadth as compared with the breadth of eaves, pitch of roof, &c. There are very few houses the eaves of which should not project two and a half or three feet, often more. An ascent of one foot for every foot and a half horizontal, is as flat a roof as should ever be adopted with shingles, that is, if the house is 30 feet wide, it should be ten feet higher at the peak than at the eaves—a better slope is one of 45 degrees. Steeper than this does not look well, except for cottage Gothic, which may be as nearly or about as high as its whole width.]

Use of Manure.—How would you advise me to use the manure from one horse and about twenty sheep, it having been put together and kept under cover all winter? Young Farmer. [If there is little or no long litter in it, it may be

applied to land in spring, by spreading it evenly over the surface, breaking it up finely and mixing it with the top soil by thorough harrowing before plowing it under. If there is so much long stuff with it that it cannot be treated in this way, draw it out to the side of the field where it will be ultimately wanted, and make it into an oblong pile with thin alternate layers of fence corner turf, loam, ditch washings, &c., and then let it remain a few months, until completely rotted. If the pile is long and not high, it may be easily and thoroughly pulverized and mixed together by means of a plow, harrow, and a yoke of oxen—and will then be in admirable condition to apply for fall crops of any kind, or for other purposes.]

Underdraining—Top-Dressing.—Seeing that you take some notice of inquiries, I would like to ask a few questions in regard to our soil—1st, whether underdraining would be necessary—2d, whether top dressed with manures or plowed under would be best—the soil being sandy loam and sub-soil clay, no stone of any kind in the way of the plow, and pretty hilly at that; so much so that but little water stands any length of time on the surface. J. H. *Washington Co., O.* [We repeat the simple rule to determine whether underdraining is necessary—namely, to dig holes in various places two and a half feet deep, and if the water stands in these holes several days during the wetest time of the year, the ground should be underdrained—if on the other hand the water when it falls into these holes immediately passes off through the porous subsoil, draining would be of no use whatever. Plowing under manure is always best on light soils Top-dressing pastures or lawns which we do not wish to plow, if done in autumn or winter, so that the soluble parts of the manure will be carried by the early spring rains into the newly thawed porous surface, will be of much use—but the most so on heavy or clayey soils.]

Root Crops.—Will you please inform me through The Cultivator the best kind of root crop for stock? What time to sow—how to plant out, and what time to harvest them—the cost of seed for half an acre, and where I can get it. Christian Trauger. *Pleasant Unity, Pa.* [Carrots and Ruta Bagas do best on light soils; for carrots the soil should be deep. Mangold Wurtzels and Sugar Beets succeed well on strong soils. The land must be very rich. Ruta Bagas cannot be used for feeding milch cows, as they impart a turnip taste to the milk and butter, but carrots and beets are both excellent for them; the beets are perhaps best of the two, to promote a free flow of milk, but they must be given cautiously at first. Carrots make very rich milk and yellow butter. The seed should be sown as early in spring as the ground can be made ready—it must of course be mellow and fine. There is no transplanting—the superfluous plants must be thinned out. The weeds must be never allowed to grow 2 inches high. Half a pound of ruta baga seed will plant half an acre, and will cost 50 cents—2 pounds of carrot seed or of beets will plant the same, and will cost a dollar or two. They can be had at the seed stores in large towns, and our correspondent could undoubtedly procure them at Pittsburgh. We should, perhaps, add that a planting machine is almost indispensable as a labor saver—but in its absence, the labor of dropping by hand may be greatly facilitated by nailing a tin cup, to hold the seed, to the lower end of a stick 2 feet long, and making a hole in the bottom just large enough for the seed to fall through as it is held over the drill and shaken as the operator walks along.]

Propagating the Blackberry.—I would like to know how to propagate the Lawton Blackberry, so as to get the most plants in one season. Is there any difference between the Lawton blackberry and the New Rochelle, or does the Lawton go by any other name? Can you tell me the cost of the bushes? William Rhodes. [The New Rochelle blackberry is the true name of the sort called Lawton. The sorts are precisely the same. They are propagated by placing pieces of the root under the surface of a rich mellow soil, and giving them bottom heat in a hot-bed or propagating house. They also propagate themselves by suckers. The plants are sold by nurserymen generally at $5 or $6 per 100.]

Diseases of Horses.—Will you inform me through the Co. Gent. of the title of the best work on the Diseases of Horses, and where it can be had? I want a work that will give me a full description of the diseases they are subject to, and the remedy. J. C. M. [We know of no better work than Dr. Dadd's "Modern Horse Doctor," which we can send you postpaid for $1.25.]

Draining Side-Hill.—I am about making some side-hill ditches on a piece of ground on which I shall plant fruit trees. I would thank you most kindly, if you will tell me how much fall they should have, the distance apart to put them, &c., &c. E. C. J. *Va.* [Cut the ditches directly down hill by the shortest way—the reasons for which are fully explained in the Rural Register for 1859, in the article on underdraining. The depth should be about three feet; and the distance apart twenty-five to thirty feet for heavy soils, and thirty-five to forty-five for porous soils.]

Peavine Clover.—I see it stated in the columns of your paper that the large or peavine clover is recommended highly. Will you please inform me where I could procure the seed, the price per barrel or bushel, &c. M. Roblee. [See advertisement on another page, of William Thorburn of this city, price 12½ cents per pound.

Apple-Pie Melon Seeds.—Can you inform me where I can obtain some Apple-Pie melon seed. J. H. Abbott. [Of Wm. Thorburn of this city, and we presume at the seed stores generally.]

Worms in Horses.—I have a horse that is terribly wormy. Is there any cure for him? F. A. W. [We infer that worms (not bots) which infest the intestines are here meant. Dr. Dadd prescribes the following to remove them: 12 ounces castor oil, oil of wormseed one ounce, and oil of tansy three drachms—to be given on an empty stomach, followed by mashes of fine feed or shorts, well seasoned with salt. To be repeated, if necessary, until the bowls respond.]

Pines from Seed.—I am cutting the timber, oak and chestnut, from a lot, the soil of which is a heavy gravelly loam. Can I sow white pine seed to advantage, after the wood is cleared off; and when and how can it be collected and sown? F. A. W. *Still River, Mass.* [The shade having been removed and the sun let in, we do not think the young seedling pines would succeed. If weeds should spring up they would smother them. Young pines are very minute and feeble, and would need careful treatment, inapplicable to broad fields.]

Cattle and Pigs for Small Farms.—Being unacquainted with stock, and about to stock a small farm with four cows, please imform me what is best—Durham, Devon or native, and what breed of pigs? E. T. *Providence, R I.* [Procure the best native cattle—handsome form, good milkers, &c.—and if a full-blood or nearly full blood Durham bull can be had to breed from, the half bloods resulting will be likely to prove very satisfactory animals—costing only as much more than natives as the cost of the bull service. Suffolk pigs and their crosses are the best. Full blood cattle cannot be raised economically on small farms, and the course here designated will be found most profitable.]

Oats and Corn for Horses and Cattle.—What is the value of oats, ground, for feeding horses and cattle, as compared with Indian corn meal? An old farmer told me some years since, that he would prefer one bushel of corn and one of oats mixed, for fattening hogs, to two of corn. Is that opinion sustained by facts? F. A. W. [The various experiments which have been made to test the value of oats as food for cattle, vary from each other about *one hundred per cent.* in the extreme—conjectures or "opinions" cannot therefore be very reliable. For ordinary feeding, we should prefer them mixed, to either or both separate.]

[For the Cultivator and Country Gentleman.]

FAMILY RECIPES.

Sponge Cake, No. 1.—One egg (beat the white separately to a froth.)—1 cup of sugar—1 cup of milk—1 2-3 cups of flour—1 tablespoonful of butter—2 teaspoons of cream tartar—1 teaspoon of soda—season with lemon extract or nutmeg.

Sponge Cake, No. 2.—Three eggs—1 cup of sugar—1½ of flour—1 teaspoon cream tartar—½ teaspoon of saleratus—nutmeg and lemon.

Sponge Cake, No. 3.—Three eggs—1 cup of sugar—1 cup of flour—3 tablespoons of cream—2 teaspoons of cream tartar—½ teaspoon of soda, and nutmeg. While warm spread with jelly, cut it in slices, and roll them quick as possible.

Cake with or without Eggs.—One cup of butter—2 cups of sugar—1 sup of sweet milk—½ cup of sour milk, or buttermilk—1 teaspoonful of saleratus—flour to make it thick, and fruit if you choose.

Red Raspberry Leaf Tea—Is valuable to allay inflammation, internally or externally, especially week and inflamed eyes, fever, &c. If people knew its value they would prize it.

Cure for Diarrhea.—One teaspoon of salt—1 tablespoonful of sharp vinegar—mix with water. Repeat the dose within a few hours if necessary. Mrs. Elihu Brown.

Blandford, Mass.

[For the Country Gentleman and Cultivator.]

Four Thousand Bushels of Corn on Forty Acres.

EDITORS COUNTRY GENTLEMAN—In October last I sent you a short account of the proceedings at the "Eastern Division Fair." In that account I gave you the amount of corn raised on an acre, by JAMES ARMSTRONG, Esq., at his country seat two miles from the city. You published it with an editorial query as to whether it was in the ear or shelled. I supposed as a matter of course it was shelled, as that is the way we sell corn in Tennessee—(we do not call the *cob* corn,) and would have written you to this effect, but preferred waiting until I could see Mr. Armstrong, and ask him about it. It was some weeks before I saw him, and since then I have not had time to write. He told me that the premium was offered for only the largest yield of one acre. He had an acre measured in the best part of the field, and the corn gathered, shelled, *measured*, (not weighed,) was one hundred and sixty-six bushels and some quarts, (I do not remember how many.) The corn was sound and good, as it weighed sixty pounds per bushel. Mr. Armstrong further told me that he had forty acres in corn, which made him four thousand bushels, or an average of one hundred bushels per acre. From the same ground he gathered fifty two-horse wagon loads of pumpkins, forty bushels of peas, and ten bushels of beans.

If you still question the truth of the statement, you can address John Flemming, Esq., Secretary of the Society, or by writing to any of our county or city officers, you can learn that the statement is true. You can also bear in mind that this is the *home* of Indian corn and truthful men.

Knoxville, Tenn., Feb. 29, 1860. A. C. CARNES.

[For the Country Gentleman and Cultivator.]

COST OF RAISING GRAIN.

For the past five years I have kept an accurate account of the cost of all my farm products, with the view of ascertaining which was the most profitable. The first year, 1855, I planted six acres of corn at a cost of $21.80 per acre, and total cost of $130.80 for cultivation. My piece gave 186 bushels of corn or 31 bushels per acre. Deduct the worth of the fodder and pumpkins ($5 per acre) leaves $100.80 as the cost of the corn, or about 55 cents per bushel. Sold for 77 cents per bushel, giving a profit of 22 cents per bushel and $6.82 per acre.

Nine acres of oats cost $103.50, or $11.50 per acre for cultivation, and giving 405 bushels of oats or 45 bushels per acre. Deduct the price of the straw $22, and we have $81.50 as the cost of 405 bushels of oats, or about 24 cents per bushel—sold for 42 cents per bushel, giving a profit of 18 cets per bushel and $8.10 per acre.

Eleven acres of rye cost $132 or $12 per acre, and gave 198 bushels or 18 bushels per acre. Deduct the straw, $10, leaves $122 as the cost of 198 bushels of rye, or nearly 62 cents per bushel—sold for 75 cents per bushel, giving a profit of 13 cents per bushel or $2.34 per acre.

Three acres of potatoes at a cost of $70.50, or $23.50 per acre—gave 528 bushels of potatoes or 176 bushels per acre, and 13 cents per bushel—sold for 44 cents per bushel, giving a profit of 21 cents per bushel and $36.96 per acre.

Thus it will be seen that my potatoes gave the largest profit of any crop, and rye the smallest. The corn gave 31 per cent profit on the cost of cultivation—the oats 71—the rye 19½ and the potatoes 153.

The past year I had seven acres of corn—cost $20 per acre for 21 bushels of corn, which brings the corn at 95 cents per bushel. At the present price of corn, which is $1, I have made just 5 cents per bushel profit or $1.05 on the acre. Oats $11.40 per acre, for 47 bushels of oats, costing 24 cents per bushel and selling for 37 cents, which gives a profit of 13 cents per bushel and $6.11 per acre. Rye gives 24 bushels per acre, costing about 50 cents per bushel, and selling for 85 cents, which gives a profit of 35 cents per bushel and $8.40 per acre. Potatoes, 205 bushels to the acre, costing 12 cents per bushel, worth 25 cents, profit 13 cents per bushel or $26.65 per acre. The average produce for the five years, was—

Corn,	34 bush.	per acr.,	cost 81c.	per bush.,	selling price	86c.	profit,	25c.
Oats,	44 do.	do.	do. 23	do.	do.	43	do.	10
Rye,	20 do.	do.	do. 50	do.	do.	76	do.	26
Pot's,	171 do.	do.	do. 14	do.	do.	43	do.	29

As I became convinced that potatoes are the most profitable crop that I can raise, I devote more ground to them each year, still I continue to raise a little of all other kinds, lest the potatoes may fail. But it does not follow, that because I make potatoes the most profitable, that every man can do so. Some farms are best adapted to one thing and some to another, and the only way to ascertain which those things are, is to keep an exact account with each crop for a few years, and it is an easy matter to know which pays best. It is true that farming is a slow road to wealth, but it is sure in time. Any man with good health, (and without that he cannot succeed in any business,) and a reasonable share of industry and go-a-headitiveness, can succeed in farming if he only sticks to it and makes it his business. FARMER BOY. *Oak Hill, N. Y.*

SHRUBBERY.

No garden is complete without its shrubbery. A large garden of course, requires a good deal to keep it from being naked and bare in appearance, while a small one may, by a judicious arrangement of clumps of shrubs, be made to appear much larger than it really is. The list of shrubs now cultivated is large, and constantly increasing. Equally with the other branches of ornamental gardening, this department has received greatly increased attention of late years.

Shrubs are defined as plants with woody stems, perennial in their nature, and which do not grow to any great height, say twenty feet as the limit. Above that height they are properly trees. The great majority of shrubs bear flowers; in many, the flowers are succeeded by ornamental fruit; a few are cultivated only for their foliage, ornamental bark, or habit of growth. Most shrubs are spring flowering, but it is desirable in planting a garden to make a selection which shall embrace some of the late flowering varieties also.

In order to arrange shrubbery properly, it is absolutely necessary to be informed as to the usual height and habits of growth of the shrubs to be planted. It is a very common fault that people order shrubs, perhaps making a very judicious selection of sorts, and neglect forming any plan for their arrangement until they are received from the nursery, when it is of course too late for much consideration respecting them; so the gardener is allowed to put them in wherever he chooses, and the result is, most likely, that mistakes are made which it will take years to rectify.

Shrubs require very little care and attention beyond a somewhat particular pruning early in the spring, which is necessary to preserve them of a good shape. No one should begrudge the few hours labor which will be necessary for this purpose, particularly as it may be performed at a time when there is generally abundance of leisure.

We add a list of select shrubs, in which the dwarf sorts, that is those not exceeding the height of five or six feet, are placed first. The time of flowering is also designated:

Double Flowering Almond—Spring.
Berberis or Barberry, various sorts—Spring.
Calycanthus or Allspice—June.
Azalea or Swamp Pink—Spring.
Deutzias, various kinds, and all beautiful—June.
Corchorus or Kerria Japonica—July to October.
Peonia Moutan or Tree Peonia—Spring.
Spireas, various kinds, all desirable—May to August.
Spirea Reevesii flore pleno, especially beautiful.
Weigelia rosea and W. amabilis, very elegant shrubs with pink flowers—Spring.

Of the above, the smallest collection should contain Deutzia gracilis, Spirea Reevesii fl. pl., and Weigelia rosea.

Of the taller shrubs, we would select—

Chionanthus Virginica or White Fringe—20 feet high when full grown.
Cydonia Japonica or Japan Quince, 6 to 8 feet high—Spring.
Euonymus or Burning Bush, 10 feet. Ornamental berries in the Autumn.
Altheas or Rose of Sharon, 10 to 12 feet, sometimes larger. Flowers in Autumn. We have not found the Althea perfectly hardy of late years.
Philadelphus Coronaria or Syringa. Very fragrant—July.
Ribes or Flowering Currant—beautiful—Spring.
Robinia hispida or Rose Acacia—July and intervals afterwards.
Syringa vulgaris or Common Lilac—Spring.
Syringa-Persica or Persian Lilac—fine—Spring.
Viburnum opulus, Guelder Rose or Snow-Ball—June.

Of the taller shrubs, we should recommend particularly the Philadelphus Coronaria or Syringa, Japan Quince, and Flowering Currant. G. B. H.

THE CULTIVATOR.

ALBANY, N. Y., APRIL, 1860.

Fourth Annual Report of the Secretary of the Maine Board of Agriculture, 1859.—We are indebted to S. L. Goodale of Saco, the Secretary of the Maine Board of Agriculture, for this volume of over 250 pages. It contains a large amount of valuable matter on practical agriculture, more especially in relation to cattle, grasses, and grazing; including also notices and descriptions of the newer mowing machines, hay presses, &c., with many illustrations. The only improvement we could desire is a subdivision of the work into heads, as it is now entirely deficient in chapters, sections, or indications of separate subjects,—a deficiency however partially made up by a good index. It is handsomely printed, and as a repository of facts and experiments, is eminently creditable to the Board and its intelligent and indefatigable Secretary.

Horn-ail.—Dr. Dadd, in his late excellent work on the Diseases of Cattle, treats with great severity the common opinion that nearly every disease which attacks cattle is the "horn-ail," or "hollow horn," or else "tail-ail"—the coldness or heat which these parts exhibit when the animal is sick, being only symptoms. We lately had a valuable cow taken sick, and kind neighbors directed the horns to be bored, the tail to be *shortened-in*, &c. We suspected the trouble to arise from accidentally eating too much grain, producing indigestion, and attendant evils, and accordingly administered half a pint of freshly pounded, fresh charcoal, mixed with a quart of water, and poured down the animal's throat by means of a junk bottle. This is one of the best, most efficient, safe and certain remedies we ever used for such diseases. It can scarcely in any case do injury. In the present instance the hollow horn and tail-ail were soon cured.

Soiling Cattle.—We make the following extract from a private letter from a subscriber in Jefferson county:

"In your note to me of last August, you expressed a wish that I would furnish you for publication, the result of my experience in the soiling of stock. I have hesitated about doing so, for the reason that I do not 'wield the pen of a ready writer," and have some doubts about the propriety of my attempting to write for the public eye. I am fully satisfied, however, that the soiling system is *the* system for small farms, or for even large ones, if the land is mostly tillable. In speaking with my neighbors upon the subject, about the first remark made by them is the inquiry, 'will cows do as well?" Perhaps the general impression may be that stock kept in this way will not do as well—this I think a mistake. At some future time I may furnish you with the details of the method pursued by me, for publication, if you think them of sufficient importance to the public."

This subject of soiling cattle is one of much interest, and there is a great desire for practical information in relation to it. We hope our correspondent will furnish the details of his practice.

Importation of Ayrshires.—We learn that Mr. E. S. Poor, of South Danvers, Mass., has lately received two heifers and one bull of the Ayrshire breed from Scotland. They are said to be from the best blood in Scotland, and good judges here pronounce them as fine looking animals as have been imported in that section. Mr. P. writes us that after the heifers calve he intends to test them accurately in comparison with "native" breeds, and we hope he will favor us with the results for publication.

☞ We are indebted to Mr. Alderman Mechi, for a copy, in pamphlet form, of the Paper read by him before the Central Farmers' Club, London, Feb. 6, on the "Sewerage of Towns as it affects British Agriculture," with a copious Appendix, affording much statistical and other information of value in connection with the subject, together with the recent correspondence of the Alderman with Baron Liebig, to which we have heretofore alluded. Also to Robert Russell, Esq., of Edinburgh, for an interesting article on "Grass Seeds," communicated by him to the Highland and Ag. Society's Journal. Also to Mr. Charles Hendrie, of Airdrie House, for copies of recent Glasgow journals.

☞ The Second Annual Meeting of the "Association of Breeders of Thorough Bred Neat Stock," as the full title of the association apparently runs—was held at Springfield, the 7th inst. We hoped to have been present, but this proving impossible, we quote from the published reports the following list of officers:—

President—Paoli Lathrop of South Hadley.
Vice Presidents—Josiah Fogg of Deerfield, William Birnie of Springfield, R. Linsley of West Meriden, Ct., Jacob N. Blakeslee of Watertown, Ct., John Brooks, Jr., of Princeton, Mass.
Secretary and Treasurer—H. A. Dyer of Hartford, Ct.
Committees on Pedigrees.—On Short-Horns, Herefords and Alderneys—S. W. Buffum of Winchester, N. H., S. W. Bartlett of East Windsor, Ct., Phineas Stedman of Chicopee, Mass.
On Devons and Ayrshires—Sanford Howard of Boston, E. G. Faile of West Farms, N. Y., B. H. Andrews of Waterbury, Ct.

A report of the committee appointed at the previous meeting, on pedigrees, and a supplementary report by Mr. B. H. Andrews of Waterbury, Ct., on the scale of points for Devons, elicited an animated discussion. The afternoon was chiefly occupied with the discussion of pedigrees and the imperfections of the Herd Books.

It was voted to hold the next anuual meeting at Springfield, on the first Wednesday in March, 1861. Breeders of stock are requested to send the pedigrees of their animals to the secretary before the 1st of February next. A session in the evening was devoted to a free conversational debate on root culture and the feeding of roots.

Some of the speakers in the afternoon expressed themselves as by no means satisfied with either the English or American Herd Books, and the proposition that a new one, to be entirely purged of all imperfect or suspicious pedigrees, should be gotten up under the auspices of the Association, actually met with so much favor from the meeting, that a committee was appointed to consider its propriety and report another year.

A Good Cow.—I had a cow, (which will be eighteen years old in April,) delivered of a fine calf on the 20th ult. I have owned her thirteen years, and twelve years since, we made (in the month of June) twenty-one and a quarter pounds of butter from her in seven days. She had not calved for four years, but she was milked until October last. I disliked to kill her, as she was foster-mother to my child, who will be 12 years old in April, and weighs 95 lbs. C. B. *Uplands.*

Musquet Grass.—I send you a small quantity of Texas Musquet grass seed, which, if it is not in your neighborhood, may be interesting to some of your farmers. I have raised it successfully at my farm at "Grotto Dell," Roane Co., Va. I deem it a good and valuable grass for pastures, though inferior to timothy and clover for meadows or for hay. James A. Lewis. *Kanawha C. H., Va.*

Osier Willow for Hedges.—If you will insert an inquiry as to how the Osier Willow is liked for live fence, I think it would be read with interest by many. I set 21 rods last spring. It has made a dense growth of five feet, and has been examined by many of our best farmers, who unanimously pronounce it just the thing for the purpose of fencing. Mice will not gnaw the bark, and the annual clippings can be sold for enough to pay well for all trouble. Mr. P. W. of Auburn, remarked on viewing my hedge—"I have all my life been looking for a hedge plant that would make a quick and durable fence, and now I think I have found it." D. L. Halsey. *Cayuga Co., N. Y.*

Lice on Cattle.—In your issue of the 26th inst. I notice an inquiry as to what application will most speedily destroy lice on cattle. Permit me for the benefit of C. H. M. and others, to give a little of my experience in the matter. During a number of years that I have kept cattle, I have occasionally had calves and full grown cattle infested with vermin—have tried various remedies, but was never entirely successful until two weeks since, when I discovered that two of my young cows were very lousy.

At the suggestion of a neighbor who appeared to have the utmost confidence in the remedy, I applied freely lamp oil from the head along the back, and behind as far down as the udder—also in spots along the sides—it has proved entirely effectual. In two days after, upon examination, I found the slain in abundance, but none that were alive.

Fayetteville, N. Y. S.

Posts Should be Inverted.—Wm. Howe of Allegany Co., relates in the Genesee Farmer, an experiment made to test the comparative durability of posts set as they grew or top-end down. He says:—"Sixteen years ago, I set six pairs of bar posts, all split out of the butt cut of the same white oak log. One pair I set butts down, another pair, one butt down, the other top down; the others top down. Four years ago, those set butt down were all rotted off, and had to be replaced by new ones. This summer I had occasion to re-set those that were set top down. I found them all sound enough to re-set. My experiments have convinced me that the best way is to set them tops down."

Imported "Symmetry."—We find the annexed notice of this splendid horse, which was imported last autumn by Dr. J. R. Woods of Albemarle county, Va., in the Charlottesville Advocate: "Symmetry was on our Court Square on Monday last, for public inspection. So far as we could gather from the opinions of our farmers, it was generally conceded that he fully comes up to the high praises which he has received at our State Fair and on exhibition in other places, and that he is admirably suited to the purposes of this county."

Barley *vs.* Indian Corn.—The question, as to the relative value, pound for pound, of barley and Indian corn for feeding farm stock, was recently discussed by an Ag. Society at Rhode Island. It was thought (as reported in the Boston Cultivator,) by all who had used both, "that the barley meal was as valuable as the Indian for sows suckling pigs, for young pigs, and for all swine except within a month of slaughter, when corn meal may harden the pork. It was thought best for milch cows, and for sheep at lambing time, it is highly recommended. It was also thought good for making beef." Some had tried it for working horses, but did not like it, though it is the only grain given the hardy Arab steeds. The comparative profit of its growth depends upon its success as a crop. Its failure in many sections where it has formerly flourished, makes us prefer the surer product of Indian corn.

Curious Fact in Cheese Making.—In the celebrated Goshen cheese dairies, it is found, according to a writer in the Ohio Farmer, that the greater the amount of curd that can be obtained from a given amount of milk, the better will be the curd or the quality of the cheese made from it. And this difference in amount, under the management of various curd makers, is enough to astonish those who have no actual acquaintance with the matter. It is said sometimes to equal a fourth of the whole amount.

Independent of Peru.—The farmers of Great Britain are congratulating themselves that they are becoming more independent of the Peruvian Guano monopolists. The reports for the past year show that "while the sales of guano in 1859 were far short of former years, substitutes can be obtained of equal value to the consumer at a lower price." Superphosphate of lime is now largely made by local manufacturers, and the prices of raw materials have been generally on the decline.

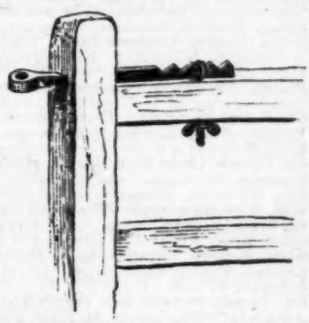
Profits of High Farming.—In a late lecture, Mr. Alderman Mechi, referring to his Tiptree Hall estate, said: "For the last six years, my gain as landlord and tenant on my little farm of 170 acres has been nearly £700 (about $3,500, or over $20 per acre,) per annum. Even this year, with wheat at 42s. per quarter, I have gained £600, after paying every expense. Of course, much of this gain has arisen from steam-power, drainage, deep cultivation, and other improvements; but the liquefied-manure system has greatly contributed to this result."

Large Ear of Corn.—We have been shown an ear of corn, brought from Kentucky, which had 26 rows, and about 1,000 kernels.

GATE HINGES.

Messrs. Editors—Can you give me the best and most approved fixture for letting out or contracting the hinges of farm gates, so as to compensate sagging? B.

The annexed figure shows a good contrivance. The upper side of the hinge, (which is made just loose enough to slide when required,) has a few notches. It passes through a ring, which by means of the nut below the bar on which the hinge rests, is drawn tight, holding the hinge firmly to its place. When it is desired to raise or lower the latch end of the gate, unscrew the nut just enough to allow the notches to pass freely; slide it to the desired position, screw up again firmly, and the thing is done. To be firm and strong, this contrivance requires a good sized and solid heel post to the gate—a thing which all gates should have, and which is no detriment to easy and successful working; for, being close to the hinges, it exerts no leverage to draw them or cause sagging; and having a very short motion it does not give any momentum to the gate against the latch post, which so frequently batters gates to pieces when heavy at the latch end.



How to Raise Carrots.

Editors Cult. and Co. Gent.—In "Rural Affairs for 1860," you recommend raising carrots for cows in villages. Now I wish you to answer the following questions, through The Cultivator—1st. How should the ground be prepared?—2d. When should they be sowed?—3d. What is the best kind to raise?—4th. How far apart should the drills be, and how far apart in the drill should the carrots be when properly thinned?—5th. How much seed should be used to the square rod?—and 6th What will the seed cost to sow 10 rods.

Sunny View Garden, Ohio. G. W. B.

1. The carrot wants a deep, rather light, sandy loam soil, of the highest degree of fertility; but will succeed on a strong loam, if dry and mellow. When the subsoil is hard, deep subsoiling is of great value. If thoroughly plowed and manured the previous year, it would be best, except on the very lightest soils, which do not hold manure—2. Early sowing is best, say as early or before the first planting of corn. Later crops are sometimes injured or prevented from vegetating by drouth—3. The long orange and the white carrot are the two best sorts. The white is perhaps most productive, and much more easily harvested—but it is not generally considered to be quite so rich as food, and it is in greater danger of injury from late autumnal frosts—4. Sow in drills with a planter, two and a half to three feet, and thin out to six inches in the drill, if the soil is rich; or four inches if not rich.

GRAPES FROM CUTTINGS.

Editors Co. Gent.—I send you the following remarks on the propagation of grapevines from cuttings, which may be done with very little trouble.

Have a box 2 feet high, and about 2½ wide—the length as you require—fill half full of well pulverized soil—prepare the cuttings with three eyes—cut smooth below the bottom one—place them in a slanting position, with the last bud just above the soil—take sixpenny white cotton cloth, and nail tightly over the box—give warm soft water freely every evening—place the box in a sunny nook, and in a few weeks your box will be filled with grapevines ready for potting or planting in borders.

From one who is experimenting on the culture of the vine in a small green-house in summer, and in the cellar through the winter. J. A. D.

WM. R. PRINCE & CO., FLUSHING, N. Y., will continue to reduce their prices for Grapes in their Catalogues published spring and fall.

NATIVE GRAPES AT REDUCED PRICES.

The following 38 cents—$4 per dozen: Alexander, Early Amber, Elsinburg, Hartford Prolific, Minor or Venango, Northern Muscadine. The following 50 cents—$4.50 per dozen: Albino, American Hamburgh, Baldwin, Blackstone, Brinckle, Canby's August or York Madeira, Cassady, Concord, Diana, Emily, Franklin, Garriques, Halifax, Herbemont, Kilvington, Kingsessing, Lenoir, Louisa, Marion Port, Mary Ann, Missouri, Norton's Virginia, Ohio or Jack, Ohio Prolific, Raabe, Rebecca, St. Catherine, Summer Black, Wine Arbor, Winslow. The following 50 to 75 cents—$5 to $8 per dozen: Bland, Canadian Chief, Child's Superb, Clara, Ozark, (3 varieties,) To Kalon, Union Village. The following 75 cents—$8 per dozen: Baltimore, Black King, Coleman's White, Early Hudson, Hensell's White, Holmes or Old Colony, Large True Marion, Manhattan White, Monteith Cluster, Mustang, Napoleon, Pond's Seedling, Potter's Catawba, Purdy's Prolific, Ramsdell, Scuppernong, (3 varieties,) Secord's White, Somerville, Troy Hamburgh. The following 75 cents to $1: Anna, Catawissa, Ive's Seedling, Long, Los Angelos, Longworth's Catawba, Miles, Offer, White King. The following at $1: August Coral, (true,) Braddock, Carter's Favorite, Early Isabella, Empire, El Paso, Graham, Gridley, Hyde's Eliza, (true,) White Isabella, White Shonga. The following $1 to $2: Delaware, (by some called Native,) Taylor or Bullitt, Logan, Ontario and Purple Catawba. The following $2 to $3: Allen's Hybrids, Rogers' Hybrids, and Cuyahoga: and in the spring the following, $1 to $1.50: Cuyahoga, Delaware, (called native by some,) Logan, Taylor or Bullitt, Ontario, Purple Catawba, Allen's Hybrids, $2 to $3, and in the spring, Maxitawny, Blue Favorite, Wilmington and many others. Isabella and Catawba, one and two years, $4 to $8 per 100. Clinton, one and two years, $7.50 to $10 per 100. Concord, Diana, and Hartford Prolific, $25 to $30 per 100.

Foreign Grapes,—All usual varieties 50 cents—$4 per dozen; and all the new varieties at reduced rates.

Blackberries—New-Rochelle, Dorchester, Parsley-leaved, &c. Raspberries—Antwerp, Fastolff, Franconia, Brinckle's Orange, Allen, &c. Currants—Versailles, Cherry, Caucase, White Grape, Fertile d'Angers, Victoria, &c. Strawberries—A collection unequalled by any other, and at the lowest rates (see Catalogue.) Rhubarb—Linnæus, Victoria, Prince Albert, Magnum Bonum, &c. Spanish Chestnuts, Filberts, Figs, Pomegranates, Mulberries, &c. Stocks—Apple, Pear, Mazzard, Mahaleb and Angers Quince. 18,000 Norway Spruce, 8 to 10 feet. 12,000 Arborvitæ, fine form, 6 to 10 feet. 10,000 Silver Maples, 8 to 12 feet. 50,000 Osage Orange, 1 and 2 years. Bell and Round Cranberries. Large Apples, large Standard and Dwarf Pears in bearing, large Cherries and Dwarf do., large Plums. Seeds—Osage Orange and Sorghum. Chinese Potato or Dioscorea, $3 per 100. Bulbs—Gladiolus, French Hybrids, 70 varieties, 15 cents to $1; Tuberoses, Amarylis, Jacobean Lily, Tiger Flowers, Japan Lilies, Cyclamens, Oxalis, and 300 splendid varieties of Dahlias. N. B. We ask especial attention to our Descriptive Cataloge of Grapes, comprising 400 varieties. Mar. 22—w1t*

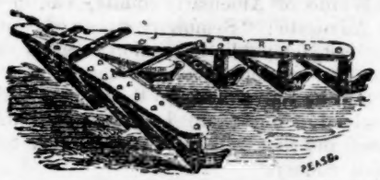
GREAT CURIOSITY.—Particulars sent free. Agents wanted. SHAW & CLARK,
Dec. 8—w13tm6t. Biddeford, Me.

MARBLEHEAD DRUMHEAD.

This Cabbage is by far the most popular and profitable kind sold in Boston Market. It originated in Marblehead, Mass., and holds the same rank among cabbages as the Hubbard squash among squashes, being distinguished for its reliability for setting a symmetrical head remarkably hard and heavy. It is early, very fine grained and sweet, with a stump, when properly cultivated, of but one to two inches in length. Under fair cabbage culture, ninety-five per cent. will set good heads to the acre; under good culture, frequently every plant on an acre will set a marketable head. A package of the best variety of this cabbage, the Stone-Mason, containing seed more than sufficient to raise a winter's supply for one family, forwarded post-paid to any part of the United States for 25 cents. One pound of seed forwarded post-paid on the receipt of $4, or for $3 to parties paying their own freight. I aim to introduce no product new to the public that will not be a full return for the money they invest. I will give five dollars to any person for one ounce of seed of any Drumhead Cabbage, that will excel this variety. JAMES J. H. GREGORY,
Mar 29—w7tm2t Marblehead, Mass.

FARM FOR SALE.—Situated about half a mile of the pleasant village of Wallingford, New-Haven county, State of Connecticut, and about three-fourths of a mile of the Hartford and New-Haven depot. The buildings are nearly new and very convenient, and well located. A good Orchard of grafted fruit of all kinds—a spring of water is brought to the house and barn. Said farm contains about one hundred and twenty acres. The whole or part will be sold to suit a purchaser. It is as good a farm as there is in the county, and will be sold on reasonable terms. For particulars inquire of
Mar. 1—w2tm1t. P. WHITTELSEY, Wallingford, Conn.

SOMETHING THAT EVERY FARMER OUGHT TO KNOW.



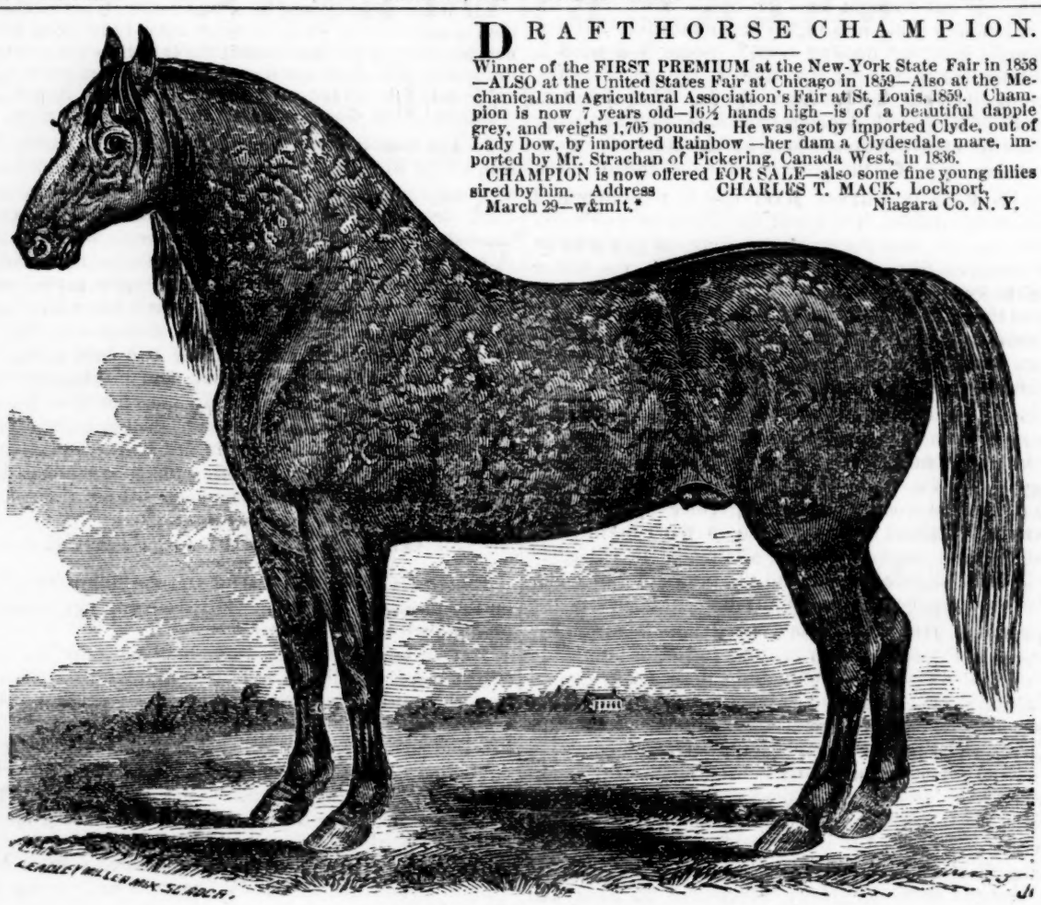
THAT D. W. SHARE'S PATENT COULTER HARROW, HORSE HOEING MACHINE, and POTATO-COVERING AND HOEING MACHINE, will save labor enough in one season to pay their cost, if used understandingly; and Manufacturers ought also to know that one of the best investments of the present day is to purchase the right of the above implements, as several States remain yet unsold. All orders for the above promptly attended to, except from territory sold.

For further particulars, address the subscriber, manufacturer and Patentee, who will send Circulars or any information desired, free to any part of the United States. D. W. SHARES,
Mar 22—w3tm1t Hamden, Conn.

DRAFT HORSE CHAMPION.

Winner of the FIRST PREMIUM at the New-York State Fair in 1858—ALSO at the United States Fair at Chicago in 1859—Also at the Mechanical and Agricultural Association's Fair at St. Louis, 1859. Champion is now 7 years old—16¼ hands high—is of a beautiful dapple grey, and weighs 1,705 pounds. He was got by imported Clyde, out of Lady Dow, by imported Rainbow—her dam a Clydesdale mare, imported by Mr. Strachan of Pickering, Canada West, in 1836.

CHAMPION is now offered FOR SALE—also some fine young fillies sired by him. Address CHARLES T. MACK, Lockport,
March 29—w&m1t.* Niagara Co. N. Y.



DRAFT HORSE CHAMPION.

ALL KINDS OF AGRICULTURAL BOOKS.

Farmers, Gardeners, Nurserymen, Fruit-growers, Dairymen, Cattle Dealers, and all persons interested in tilling the soil or adorning their grounds and dwellings, will be supplied with the most complete assortment of Books relating to their business that can be found in the world, by

C. M. SAXTON, BARKER & CO.,
Agricultural Booksellers and Publishers of the Horticulturist,
No. 25 Park Row, New-York.

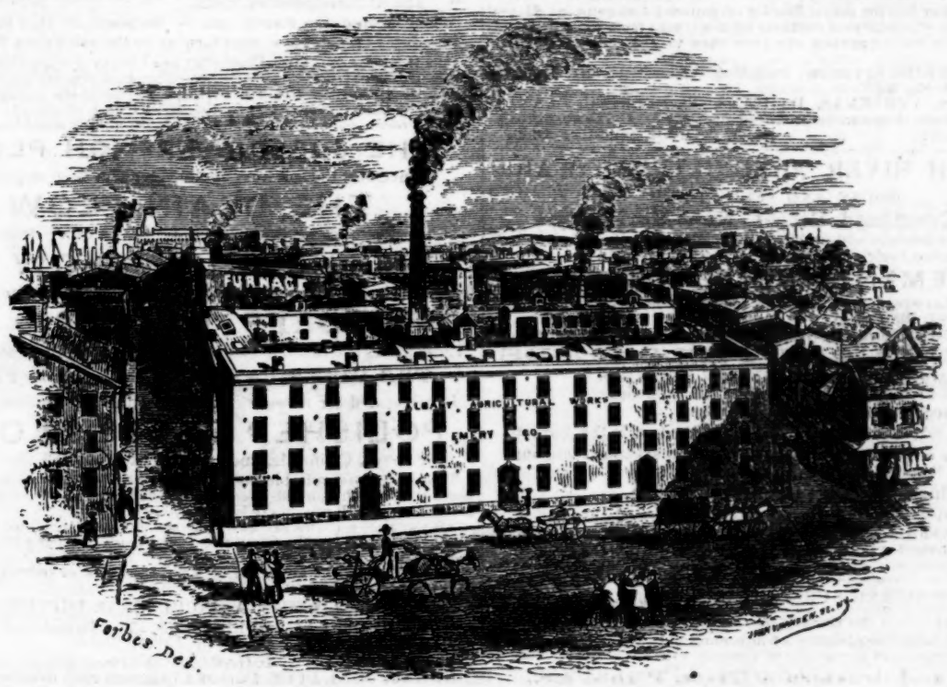
☞ Catalogues gratis. Books sent by mail. AGENTS WANTED.
Mar 15—w13tm3t

THOROUGH-BRED NORTH DEVONS AT PUBLIC AUCTION.

The subscriber intends holding his Second Public Sale of DEVON CATTLE early in the coming June, when he will offer between 20 and 30 head of his own breeding—all Herd Book animals, and of superior excellence. As at his previous sale, each lot will be started at a very low up-set price, and sold, without reserve, to the highest bidder over that amount.

Catalogues will be ready about the middle of April, with pedigrees and full particulars.

C. S. WAINWRIGHT,
Feb. 23—w6tm2t The Meadows, Rhinebeck, N. Y.



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MANUFACTURERS AND DEALERS AT WHOLESALE AND RETAIL, OF

EMERY'S PATENT RAILROAD HORSE POWER,

And all other Power Machines to be Driven by Horse Power, &c., &c.,

AMONG WHICH MAY BE FOUND

THRESHING MACHINES,	GARDEN ROLLERS,	PLOWS,
CLOVER MILLS	SEED SOWERS,	HARROWS,
CIDER MILLS,	STALK AND HAY CUTTERS,	CULTIVATORS,
FEED MILLS,	HAY PRESSES,	STUMP PULLERS,
FANNING MILLS,	FIELD ROLLERS,	MOWING MACHINES,
COTTON GINS,	SOWING MACHINES,	REAPING MACHINES,
SAWING MILLS—all kinds.	HORSE RAKES,	DOG POWERS,
CORN SHELLERS,	CORN PLANTERS,	CHURNING MACHINES.

Also every conceivable Implement required for the Plantation, Farm and Garden—also for the Dairy and Farm House and buildings. Their

PLOW DEPARTMENT

Embraces all the variety of kinds and sizes required for this Latitude, Soil, and Modes of Culture, as well as for most other Climates and Countries, and all are made under their own personal supervision, and combine all modern improvements. The materials are of the BEST Metals and Timber used in any like establishment, and their Workmanship and Beauty of Finish are unequalled.

For this portion of their Manufactory it has become necessary to make a distinct department, and which is devoted exclusively to that purpose. The great variety of Implements, as Plows, Cultivators, Harrows, Seeding Machines, &c., enables the purchaser to make his selection to suit in every respect.

The Character of the Work from this long and well known establishment is too well known to need comment here. The Proprietors would only say they will endeavor to maintain that reputation so long and liberally accorded to them by a discerning public, and they solicit a continuance of the liberal patronage so largely enjoyed by them. Their

SEED DEPARTMENT

Comprises all the variety offered by any similar establishment in the country, and all seeds WARRANTED FRESH and GENUINE, and true to name and kind.

Their newly published and highly

ILLUSTRATED CATALOGUE,

Embraces a large fund of valuable information in relation to the construction and uses of the various Machines and their principles of operation; also the FINEST and BEST COLLECTION OF ILLUSTRATIONS of Machines and Implements ever published, together with a Price List, Terms of Sale, and Warranty—which is furnished gratis to all applicants upon receipt of a three-cent stamp to prepay the postage.

EMERY BROTHERS,
April 1—w&mlt 62 & 64 State st., Albany, N. Y.

ISABELLA AND CATAWBA GRAPEVINES FOR SALE.

5,000 Isabella, 2 years old—5,000 Catawba, 2 years old,
At $12.50 per 100, or $100 per 1000.
Apply to LINDLEY M. FERRIS,
Mar 8—w4tm1t Coldenham Nursery, Orange Co., N. Y.

LAWTON BLACKBERRIES,

STRAWBERRIES, ORNAMENTALS, &c.

The subscriber has for sale a fine lot of genuine Lawtons, at $1 per dozen, or $6 per 100—25 root cuttings by mail, post free, for $1. These rootlets, as experience proves, are very sure to grow. Directions to accompany.

STRAWBERRIES in variety, including Wilson's Albany, Hooker, Peabody, Victoria, &c.

Also ROSES, VERBENAS, DAHLIAS, FLOWERING PLANTS, &c., cheaper than they can be procured elsewhere. Catalogues gratis.
Mar 8—w3tm1t H. B. LUM, Sandusky, Ohio.

NORTH RIVER AGRICULTURAL WAREHOUSE AND SEED STORE

60 Courtland Street, New-York City.

Farmers and Dealers will find it to their advantage to give us a call before purchasing their

IMPLEMENTS OR FERTILIZERS.

Our motto has ever been and still is to furnish the BEST ARTICLES at the LOWEST PRICES.

Our IMPLEMENTS are of the most improved patterns. Our

GARDEN AND FIELD SEEDS

Are selected from RELIABLE GROWERS.

Our stock of FERTILIZERS comprises the following:

No. 1 Peruvian Guano, warranted pure.
"Hoyt's" Superphosphate of Lime, the best in the market.
Poudrette, manufactured by the Lodi Manufacturing Company.
Blood and Wool Manure, $25 per ton.
Bone Sawings, Turnings and Ground Bone.
Land Plaster, &c.

We will furnish DEALERS with any of the above Fertilizers in quantities to suit at the lowest rates. GRIFFING, BROTHERS & CO.,
Feb. 9—w&m3mos. Proprietors.

HIGHLAND NURSERIES, Newburgh, N. Y.

A. SAUL, (successor to the late A. J. Downing & Co.,) has the pleasure of announcing to the patrons of this old establishment, and the public in general, that his stock of

Fruit and Ornamental Trees, Plants, &c.,

for sale for the ensuing spring trade, is full and complete, and comprises everything to be obtained in his line of business, viz:

A large stock of Apple, Pear, Cherry, Plum, Peach, Apricot, Nectarine and Quince trees, 1 to 3 years from the bud, of superior quality and growth. Grapevines, native and foreign, embracing all the new and rare varieties, Gooseberries, Currants, Raspberries, Blackberries and Strawberries, of all the new and old proved varieties. Rhubarb and Asparagus roots do.

ORNAMENTAL TREES.

EVERGREENS.—A large stock of Norway Spruce of all sizes. Balsam Fir, European Silver Fir, Austrian, Scotch and White Pines, Hemlock and American Spruce, Arbor Vitæ, Junipers, (in varieties.) and a great variety of new and rare Conifers from 1 to 5 feet high.

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FLOWERING SHRUBS.—Over 50 choice species and varieties.

ROSES.—A large collection of Hybrid Perpetual, hardy Garden and Moss, China and Tea, &c.

HEDGE PLANTS.—100,000 Osage Orange plants of extra growth, 1 to 3 years old.

The above stock is all of the best quality and growth, and will be sold on the most reasonable terms.

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A. SAUL, Highland Nurseries,
Mar 1—m2t | Mar 15-weow4t Newburgh, N. Y.

BERKSHIRE PIGS from pure imported stock, for sale at $10 per pair, delivered in New-York.

Address W. H. CLAY, Staten Island, South Side Post Office, or
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TO FARMERS AND GARDENERS.—

The subscribers offer for sale 60,000 barrels of POUDRETTE, made by the Lodi Manufacturing Company, in lots to suit purchasers. This article is in the twentieth year of its introduction into this country, and has outlived fertilizers of every other description, for the following reasons:—

1st. It is made from the night soil of the City of New-York, by the L. M. C., who have a capital of over $100,000 invested in the business, which is at risk should they make a bad article.

2d. For corn and vegetables it is the cheapest, neatest and handiest manure in the world, it can be placed in direct contact with the seed; forces and ripens vegetation two weeks earlier, prevents the cut worm, doubles the crop, and is without disagreeable odor. Three dollars worth or two barrels is all sufficient to manure an acre of corn in the hill.

PRICE.—1 bbl. $2—2 bbls. $3.50—5 bbls. $8, and over 6 bbls. $1.50 per barrel, delivered free of cartage to vessel or railroad in New-York City.

A pamphlet containing every information, and certificates from farmers all over the United States, who have used it from two to seventeen years, will be sent free to any one applying for the same.
GRIFFING BROTHERS & CO.,
Feb. 16—w13tm3t. 60 Courtlandt Street, New-York.

"WONDERFUL!"

THE "TELEGRAPH CHURN,"

which makes the best Butter in the world in TWO MINUTES, and which was pronounced the best on exhibition at the Winter Meeting of the N. Y. State Ag. Society on the 9th of this month. Price $7, and large enough for eight cows. A boy 10 years old can work it. For sale by W. W. EGGLESTON,
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THIS PLOW turns a furrow TWO FEET DEEP, and of corresponding width.

When desired, the furrow can be deepened another foot with my new subsoil Trench Plow, thus turning up the soil THREE FEET DEEP.

It is the MOST SUITABLE Plow ever used for preparing the ground for Vineyards and Nurseries, or for any other crop requiring an extra deep tilth. It pulverizes the soil better, and leaves the ground in a finer condition than can be done by the spade, and at about ONE-FOURTH THE EXPENSE—thus making it a great labor-saving machine.

THE SUBSOIL TRENCH PLOW

Penetrates the soil from one to three feet deep as required.

THE DRAIN PLOW

For opening deep ditches for tile or other drains.

THE ROCK PLOW

Turns out large stones or small rocks from either the surface or subsoil.

DEEP TILLERS.

These Plows are made to run from 12 to 20 inches deep as required.

THE GIBB'S PATENT CYLINDER PLOW

Is celebrated for its ease of draft and the wide furrow it turns.

POLISHED STEEL PLOWS

For Texas, California, and all other parts of the United States.

These are most suitable for clay and other adhesive soils, as they do not adhere to the mould-board. They are light and strong, and of all sizes, from small one-horse to large four-horse.

All the above Plows are new patterns, manufactured for this market exclusively by myself. They are remarkable for light draft and the perfection of their work.

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ALSO ALL OTHER AGRICULTURAL IMPLEMENTS.

HORTICULTURAL IMPLEMENTS.—The largest and most complete assortment to be found in the United States.

FLOWER, FIELD AND GARDEN SEEDS of all varieties.

GUANO, BONE DUST, POUDRETTE, and various other fertilizers.
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NO. 1 PERUVIAN GUANO,

Government Brand and Weight on every bag.

SUPERPHOSPHATE OF LIME

BONE DUST, LAND PLASTER, &c.

For sale in quantities to suit purchasers, at lowest market price. Send for a Circular. A. LONGETT,
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BEWARE OF WHOM YOU PURCHASE YOUR FERTILIZERS!

SECOND HAND GUANO BAGS, with the PERUVIAN GOVERNMENT STAMP, are in demand, and are bringing extremely high prices, for the purpose of mixing Peruvian with worthless guano, and selling it for a pure article. WE PURCHASE OUR GUANO DIRECT FROM THE PERUVIAN GOVERNMENT AGENTS, and cannot therefore be imposed upon. Dealers and consumers supplied with the PURE NO. 1 PERUVIAN GUANO, at the lowest cash prices, by
GRIFFING BROTHERS & CO.,
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FARMERS! ATTENTION!!

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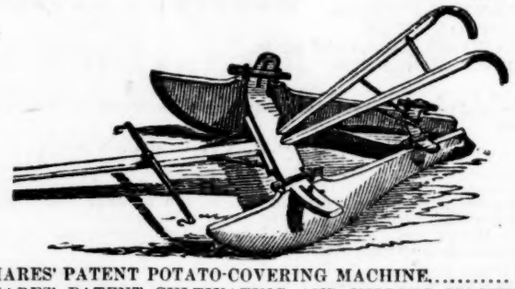
SHARES' PATENT COULTER HARROW AND GRAIN COVERER,
Price $15.



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SHARES' PATENT CULTIVATING AND HILLING MACHINE,
Price $10.

Which will save their cost in three days' work, besides making the work of harrowing, hoeing and hilling a PLEASURE instead of a drudge. Also a full assortment of PLOWS, HARROWS, SEED PLANTERS, and in fact, everything required by the farmer. For particulars, apply to W. W. EGGLESTON, (successor to Pease & Eggleston,)
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STEEL PLOWS.—We are manufacturing for the spring trade large numbers of our Mohawk Valley Clipper Plows with steel mold-board and land-side, with steel or cast point, as desired, and would refer you to the following persons, who have them in use:

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J. Ingersoll, Ilion, N. Y.
Wm. Summer, Pomaria, S. C.
R. C. Ellis, Lyons, N. Y.
Col. A. J. Summer, Long Swamp, Florida.
A. J. Bowman, Utica, N. Y.
A. Bradley, Mankato, Minesota.
F. Mackie, Utica, N. Y.

We are also manufacturing Sayre's Patent Horse Hoe and Potato Covering Machine, Sayre's Patent Cultivator Teeth in quantities for the trade; and all kinds of steel and swage work in the agricultural line. Send for a circular. SAYRE & REMINGTON.
Jan. 26—wtf Mar. 1—mtf. Union Agricultural Works, Utica, N. Y.

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Price Lists,

and to assure them that any orders they may be favored with will receive their best attention.

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Just Published, and for Sale at this Office—sent by mail, post paid, at $1.75.

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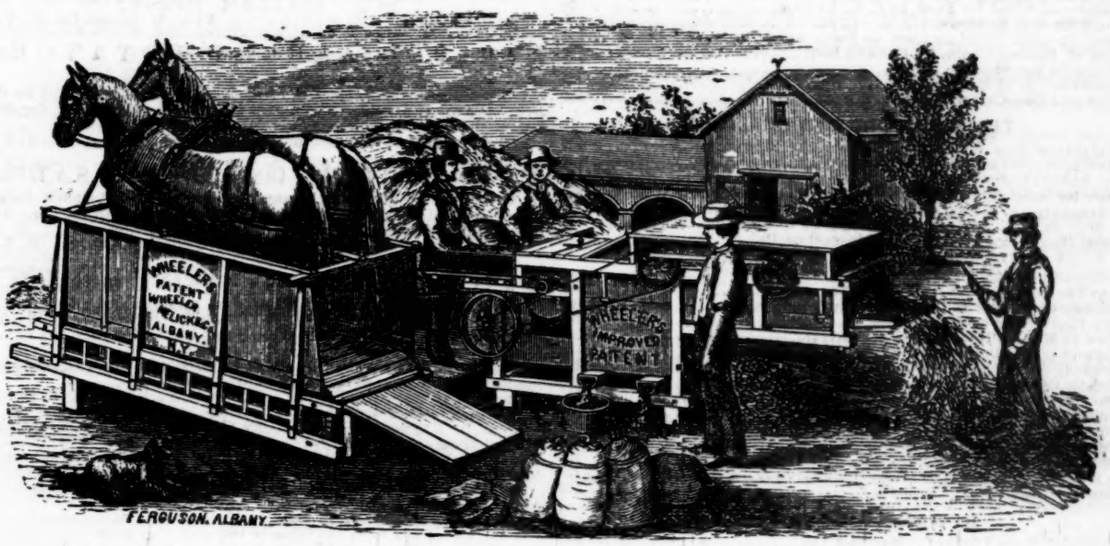
PROPRIETORS
NEW-YORK STATE AGRICULTURAL WORKS,



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(SHOWN IN THE CUT.)
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AND
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AND
OVERSHOT THRESHER WITH VIBRATING SEPARATOR,

Does double the work of the Single Machine, and is adapted to the wants of large and medium grain growers, and persons who make a business of threshing. Price $160.

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Is a recent invention, designed to meet the wants of Southern and Western customers. We believe it the simplest and most perfect Lever Power made. Price $100.

Also, Circular and Cross-Cut Sawing Machines, Clover Hullers, Feed Cutters, Horse Rakes, and other Farming Machines.

☞ To persons wishing more information and applying by mail, we will forward a Circular containing such details as purchasers mostly want—and can refer to gentlemen having our Machines in every State and Territory.

Our firm have been engaged in manufacturing this class of Agricultural Machinery 25 years, and have had longer, larger and more extended and successful experience than any other house.

All our Machines are warranted to give entire satisfaction, or may be returned at the expiration of a reasonable time for trial.

☞ Orders accompanied with satisfactory references, will be filled with promptness and fidelity; and Machines, securely packed, will be forwarded according to instructions, or by cheapest and best routes.

WHEELER, MELICK & CO.,
Albany, N. Y.
Mar 15—w2tmlt

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Mar 29—w2tm1t

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TRUE HUBBARD SQUASH, 20 cents—by mail 29 cents.
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